centres of biological research in Austria-Hungary, Russia, and Germany; he now sets forth, not only an epitome of the work that was then in progress at the several laboratories, but also his meditations on the effects produced by political circumstances upon the scientific spirit and scientific output of the respective nations. The general tenor of his views, which are deserving of most careful attention, may be gathered from the following quotations: "Les Allemands avaient voulu organiser une université grandiose à Strasbourg, mais, malgré des installations somptueuses et des crédits considérables, la vie scientifique était loin d'y avoir les mêmes manifestations brillantes qu'à Cracovie, où la domination autrichienne était moins pesante et où l'âme nationale pouvait encore s'extérioriser." "Les régimes politiques basés sur la liberté se sont toujours montrés favorables au développement des sciences et des arts. Si la discipline renforce l'esprit de logique, elle tue au contraire l'esprit d'invention." The book should be studied and digested by politicians as well as by men of science, and especially by those who are concerned with the organisation of education.

Practical Geometry for Builders and Architects. By J. E. Paynter. (*The Directly-useful Technical Series.*) Pp. xii+409. (London: Chapman and Hall, Ltd., 1921.) 15*s.* net.

IN compiling this book it has been assumed that the student is a practical man with some knowledge of the principles of geometry; hence a good deal of the more elementary work has been omitted. Among other subjects treated in the early part of the volume there are many references to surveying and surveying problems. It is almost a cause for regret that much of this matter was not also omitted, for many of the methods described would never be employed by any competent surveyor, and some could not possibly be carried out except on a sheet of drawing-paper. The author, on the other hand, is quite at home in describing the applications of geometry to problems in building construction, such as the timber of roofs, mouldings, etc., and this section of the subject, which, indeed, occupies the greater part of the volume, is excellent, and is treated in a clear, straightforward manner, which cannot fail to make the principles clear to the student.

The Electro-Deposition of Copper and its Industrial Applications. By C. W. Denny. (Pitman's Technical Primers.) Pp. xii+108. (London: Sir Isaac Pitman and Sons, Ltd., 1921.) 2*s.* 6*d.* net.

IN this little manual an outline is given of modern practice in the electro-deposition of copper in its industrial applications. These include, besides the older process of electrotyping, manufacture of copper tubes, etc., a new method of making what is called reinforced copper, in which is embedded a grid or perforated plate of steel, complete automobile radiators, driving bands for projectiles, matrices for gramophone records, and several other interesting processes of recent development. Considering the limitations of space, a remarkable amount of practical detail is included.

Tidal Power. By A. M. A. Struben. (Pitman's Technical Primers.) Pp. xii+115. (London: Sir Isaac Pitman and Sons, Ltd., 1921.) 2*s.* 6*d.* net.

THE idea of the development of power by utilising the tides is not new, but interest in the subject has been stimulated recently by the enunciation of the Severn scheme. The non-technical reader will find a number of modern proposals discussed in this book, together with estimates of costs, working expenses, and the probable power which may be obtained. Owing to the lack of practical experience on the large scale, a good deal of the matter presented is speculative; indeed, as the author himself states, there is ample scope for the display of originality, as this field is practically untrodden. He is right in advocating research, and we trust that there will be adequate research work done prior to the undertaking of any gigantic schemes.

Mining Physics and Chemistry. By J. W. Whitaker. With an introduction by Prof. W. H. McMillan. Pp. xii+268. (London: Edward Arnold and Co., 1921.) 9*s.* net.

MR. WHITAKER'S book is an introductory account of the physics and chemistry affecting mining students. The standard is not high, but so far as it goes the account is clear and accurate. Special attention is directed to such matters as flame and oxidation, mine gases (including carbon monoxide and its physiological effects), surface and mine waters, coal, and explosives. Methods of analysis are also given. The title of Fig. 25 is incorrect.

Organic Analysis, Qualitative and Quantitative. By E. De Barry Barnett and P. C. L. Thorne. Pp. xi+168. (London: University of London Press, Ltd., 1921.) 7*s.* 6*d.*

THE methods used in the detection of common organic substances, and some typical quantitative estimations, are described. Methods of determining molecular weights, and polarimetry, which are adequately dealt with in books on practical physical chemistry, might have been omitted. The authors have produced a very useful compendium for students of chemistry.

Calculations in Organic Chemistry. By Prof. V. K. Bhagwat. Pp. xi+138. (Bombay: S. Govind and Co., 1921.)

THE calculations and examples collected by Prof. Bhagwat should be very useful to teachers and students, as they are of the type which regularly appear in degree examination papers. The publishers have scarcely done full justice to the author in the get-up of the book. An English edition would probably be found useful.