

experience. An engineering contract may be divided into two parts, one legal and the other technical, and the book is roughly arranged to correspond. The legal sections, comprising ten chapters, are clearly written and illustrated by cases, but such legal expressions as "time is the essence of the contract, *prima facie*, *quantum meruit*," though commonplace to lawyers, are not always clearly understood by engineers, and a short explanation of them would enhance the value of the book. The technical chapters give suggested specification clauses for most of the general work carried out by civil engineers in excavation, embankment, concreting, masonry, brickwork, and steelwork.

The practice referred to is, as might be imagined, that common in the north of England, and in a few details would be modified in the south. The suggestion on p. 96 to paint reinforcing rods is rather unusual, and does not correspond with the advice given on p. 147. It would perhaps have been worthy of mention that wood street-paving blocks are laid with the grain vertical. The section on quantities is clear and straightforward. In essentials, building contracts and engineering contracts are similar, and a reference might have been made to the standard conditions of contract of the Royal Institute of British Architects, and to the standard method of measurement of building works of the Surveyors' Institution, which are often used as models for small engineering contracts.

E. E. MANN.

*Types of Mind and Body.* By E. Miller. (Psyche Miniatures, Medical Series, No. 4.) Pp. 132 + 5 plates. (London: Kegan Paul and Co., Ltd., 1926.) 2s. 6d. net.

THIS attractive little volume is an excellent introduction to the scientific study of the psychophysics of temperament and character. It deals in a critical and independent manner with the best recent work on types of physique and mentality, and also contains many interesting suggestions towards new lines of thought and investigation. Dr. Miller lays special stress, as is natural, on the work of Kretschmer, but he by no means neglects the work of the French and other schools. Perhaps the most important section is that which deals with the 'physiological background,' which gives, among other matters, a useful account of the functions of the internal secretions in relation to character and behaviour. Especially suggestive is Dr. Miller's discussion of the endocrine system as a link between metabolic processes and neural and mental processes, which throws light not only on the relation between mental and physical forms, but also on the more general problem of the relation between mind and body.

There are some interesting remarks about the relation between the types distinguished by recent workers and the racial types of the anthropologists, which need fuller justification. So far as is known, much the same types of temperament and character exist among all races of mankind, and this is scarcely compatible with anything like a simple corre-

spondence between the two kinds of types. In the psychological section there are some points which raise doubts, as, for example, the alleged relation between the ego-instincts and introversion, and between the sex-instincts and extroversion, but on the whole the treatment is both balanced and stimulating. There is a very well-chosen bibliography.

MORRIS GINSBERG.

*Exercises in General Chemistry and Qualitative Analysis.* By Prof. H. G. Deming and Prof. S. B. Aronson. Second edition, revised. Pp. xii + 282. (New York: John Wiley and Sons, Inc.; London: Chapman and Hall, Ltd., 1926.) 9s. net.

THE authors of this manual express the "opinion that quantitative work in an elementary course often consumes time that were better spent in the accumulation of useful and necessary qualitative information." Quantitative work is therefore reduced to a bare minimum and a scheme for the qualitative investigation of chemical phenomena, covering a fairly wide field, has been elaborated. A novel feature is the introduction of linear scales showing the relationship between the temperature and the vapour-pressure of water and between the density and the concentration of several common reagents. Working directions are minutely specified, and almost every page is liberally sprinkled with cross-references, which are likely to bewilder the student, whose natural desire to discover things for himself is stifled by the warning in heavy type that *all unauthorised experiments are strictly forbidden*. Yet the authors hope to "foster something of the research spirit at an early age"! About one-fourth of the book deals with ordinary qualitative analysis, this section being prefaced with the following instruction to the beginner: "The work is based on differences in solubility. Commit to memory the table of solubilities and get some class-drill in its applications." Such methods will not appeal strongly to teachers in English schools.

*A Junior Inorganic Chemistry.* By R. H. Spear. Second edition. Pp. viii + 392. (London: J. and A. Churchill, 1926.) 6s. 6d. net.

THIS little book, which is designed for junior forms, appears to possess no strikingly original features. It is, however, lucidly written and it contains a fair number of illustrations, though some of them are rather crude. There appears to be no direct reference to Fig. 13 in the text, nor is it clear to the reader that the rather wide tube dipping into the beaker in all probability represents a thermometer. Again, the muffle-furnace, depicted on p. 59, needs some explanation in the text. Some of the headlines are badly worded or even startling. Thus on p. 27 a paragraph of about five lines is headed "To show that Matter is not Created by the Rusting of Iron." The investigation of the rusting of iron in a later chapter is fairly good, but it might have been carried a stage further by considering the action of air-free water upon the metal. The weight of a litre of air is given incorrectly on p. 24 as 0.001293 gm.