

ART. XX.—*Medical Chemistry, for the Use of Students and the Profession: being a Manual of the Science, with its applications to Toxicology, Physiology, Therapeutics, Hygiene, &c.* By D. P. GARDNER, M. D., formerly Professor of Chemistry in Philadelphia College of Medicine. 1 vol. 12mo. pp. 396. Philadelphia: Lea & Blanchard, 1848.

MANUALS and Systems of Chemistry have been offered to the profession in sufficient numbers to suit the tastes of all, but a strictly medical chemistry has yet been a desideratum. To fill this void, and to direct attention to the intimate connections between chemical and medical science, has been the endeavour of the author in the production now before us. In a work comprised within 400 duodecimo pages, it cannot be expected that the whole of these relations should be embraced, or that minuteness of detail could be admitted, even in those portions which the author has conceived to be of most importance. Accordingly, we find that the chemistry of the metals occupies but a small space, while that of organic compounds comprises nearly one-third of the whole work. Commencing with the imponderables, the author gives a succinct and clear account of the laws and phenomena exhibited by this class, interspersed with occasional illustration and application, interesting and important to the physician and student, and concludes each division by a general application to the different branches of medical science. Caloric thus has its laws unfolded; and then the relations of heat to climate, to animals and plants, to man, and to therapeutics, pass in review; and its important connections not only with health and disease are pointed out, but with animal and vegetable organization and nutrition, together with its application as a remedial agent, and the principles on which it acts. The same remarks apply to light and electricity, in which the latest observations of Matteucci and others, and their views with regard to the physiological relations, are noticed. The general laws of chemistry are considered with more detail. Constantly keeping in view the relations to medicine, the subject of isomorphism gives rise to comments on the agreement in therapeutic action of compounds similarly constituted, with reference to experiments confirmatory of the remarks; while catalysis affords a similar opportunity, in relation to morbid and therapeutic actions. Most of the non-metallic bodies, together with arsenic and antimony, and their more important compounds, are noticed with sufficient detail, for the appreciation of their relations to physiology, toxicology and hygiene, avoiding for the most part such subjects as are especially to be found in all works on general chemistry and the *materia medica*. Organic chemistry is treated not in its whole extent, but by a judicious selection of subjects, and their relations to vegetable and animal physiology, embodying the results of the latest German and French investigations, up to the time of its publication, presenting in a clear and connected manner, an interesting survey of the science, and rendering appreciable the great advance which has been made within a comparatively short period. In closing these remarks, we would suggest to the author, that, in the next edition, notes be appended to the most recent investigations, referring to their sources, that the student may be enabled to acquire in detail information not yet familiar to all. The subject of ventilation, with its relations to hygiene and therapeutics, although it has attracted considerable attention, is yet but inadequately appreciated or understood, and would form an appropriate subject in connection with the remarks on the atmosphere, without much increase in the bulk of the volume.

The mechanical execution of the work is creditable to the publishers, the paper good, the type clear and sufficiently large for the size of the work. R. B.