

### The Water Line of the City of London after the Great Fire

By Sydney Perks. Pp. v+38+13 plates. (London: Taylor and Francis, 1935.) 12s. 6d. net.

AN interesting feature in connexion with the re-building of London after the Great Fire of 1666 is that, at the outset, "it was decided that the buildings which had existed up to the edge of the River Thames should not be re-erected on the old sites; that no new structure should be built within 40 feet of the river; and also that wharves or quays should be constructed from London Bridge to the Temple". Mr. Sydney Perks, late Architect and Surveyor to the Corporation of the City of London, with his exceptionally privileged opportunities of consulting old records not generally accessible to the public, has been at considerable pains to investigate how far these proposals were adhered to, and the volume under notice gives a documented account of the result of his researches. There is a certain amount of contradictory evidence which is carefully sifted and the grounds for acceptance or non-acceptance stated. Much of the information has had to be collected from widely different sources—minutes of committees, survey books, site plans, cash books dealing with coal dues, etc.—and pieced together so as to form a connected picture of the course of local events, which, as Mr. Perks laments, failed to engage the attention and recording ability of Pepys, busy as he was with national affairs.

Mr. Perks's exhaustive survey leads him to condemn the water-line with an area of open land corresponding to the regulation width, shown on the plan of Ogilvy and Morgan, published in 1677: it existed, he says, only in the minds of those map-makers. He finds that the original idea for a "Key or Wharf" along the river front was to facilitate dealing with buildings on fire, and that, at first, the owners of land refrained from building within 40 feet of the water line, but that, so early as 1669, the new Fishmongers' Hall constituted an important encroachment, which, though challenged, was allowed to remain, and that thereafter other builders followed the example which had been set, so that the original intention was gradually abandoned. B. C.

### Gmelins Handbuch der anorganischen Chemie

Achte Auflage. Herausgegeben von der Deutschen Chemischen Gesellschaft. System-Nummer 4: Stickstoff. Lief. 1. Pp. 282. (Berlin: Verlag Chemie G.m.b.H., 1934.) 43 gold marks.

THE first volume on nitrogen deals with its occurrence in Nature, its fixation in the soil by natural processes, its isolation from air and from compounds, its general properties and with numerous researches upon active nitrogen. A condensed summary of forty-five independent determinations of the atomic weight of the element will be found.

There is also a detailed account of investigations upon the nucleus, which have been classified as transformations, since all observed cases of nuclear disintegration have also been nuclear syntheses. The bombardment of certain atoms with fast-moving

particles has revealed the existence of isotopes of nitrogen, which have escaped detection by the mass-spectrograph. Thus whereas the atom of boron  $B^{11}$  when bombarded by an  $\alpha$ -particle yields a neutron and ordinary nitrogen  $N^{14}$ , the isotope  $B^{10}$  produces the interesting radioactive nitrogen  $N^{13}$ , which disintegrates into a positron and the carbon isotope  $C^{13}$ . Radionitrogen has also been produced from  $C^{13}$  and deuterium  $H^2$ . Nuclear transformations have also yielded two heavier isotopes,  $N^{15}$  and  $N^{16}$ , and heavier products, fluorine and oxygen.

Distinction is drawn between electrically active and chemically active nitrogen, since the two properties are independent of one another although they may co-exist. The term 'active nitrogen' is generally used to describe the electrically excited variety first produced by Strutt in 1911, which is characterised by its after-glow. It is also chemically active, but chemical activity can be produced in other ways. Electrically active nitrogen is believed to be a mixture of metastable molecules with ordinary and metastable atoms. The possible existence of triatomic molecules is also discussed. It has been shown that the removal of all ions is without effect upon both chemical activity and after-glow.

### Industrial and Manufacturing Chemistry

Part 2: Inorganic. A Practical Treatise. By Dr. Geoffrey Martin. Vol. I. Fifth edition, revised by Geoffrey Martin. Pp. xx+496. (London: The Technical Press, Ltd., 1935.) 28s. net.

DR. MARTIN's compendia are well known; their wide utility is proved by the succession of editions. The present volume has been kept well up to date, partly with the aid of practical suggestions furnished to the author; he has had the assistance of ten contributors, all of whom are well known as practical chemists.

The scope of the work includes fuels, industrial gases, water technology, inorganic acids and alkalis, gypsum and barium salts, the chlorine industries and the nitrogen industries. No better introduction to any of these is required than is here furnished, and the volumes may well form the foundation of any chemical engineer's library.

### The Foundations of Human Nature:

the Study of the Person. By Prof. J. M. Dorsey. (Longmans' Education Series.) Pp. xiv+488. (New York, London and Toronto: Longmans, Green and Co., Ltd., 1935.) 12s. 6d. net.

THIS volume in Messrs. Longman's Education Series is written by Dr. Dorsey, who is associate professor of psychiatry at Michigan for educators and social workers who are striving, very often unsuccessfully, to learn all about personality. There is a great deal of common sense in the book, and those who work steadily through it cannot fail to benefit. The author wisely points out that most juvenile delinquents can recite the Ten Commandments, but that those who taught them to recite did not at the same time obtain *rappport* with their personalities and teach them how to apply what they so glibly recite.