

Fergusson's Percentage Unit of Angular Measurement, with Logarithms; also a Description of his Percentage Theodolite and Percentage Compass. By JOHN COLEMAN FERGUSSON. London, Longmans, Green & Co. 1912. 8vo. Pp. lxvii + 467.

This is one of those costly volumes printed occasionally to advocate some novel idea; not actually incorrect, but yet quite without real value. Such books are full of pathos. One can see in their pages lost yet endless industry; painful longing for sympathetic appreciation; indomitable energy; the sacrifice almost of a life-time; and finally the refusal to accept even the kindest adverse criticism. Were not the theories of Galileo received with incredulity? Are not my theories met by similar unbelief? Galileo was right. So then must I be also. Such is the fallacious reasoning consciously or unconsciously in the minds of men like Fergusson.

The division of the circle has always been made hitherto in equal parts, ordinary degrees of arc or centesimal degrees. Fergusson proposes to divide the circle into unequal parts, one hundred spaces to each octant, or arc of 45° as ordinarily measured. To the new divisions will be attached numbers thus: 1%, 2%, . . . 10%, etc., in such a way that the number 10%, for instance, will belong to the angle whose tangent is 0.10, etc.

The author gives elaborate logarithmic tables computed for this new division of the circle; but it appears from his examples of their use that no saving of time or other advantage has been obtained. He has also had made an engineer's angle instrument provided with the new circle divisions; and has of course been unable to use a vernier. In its place is substituted a most complicated "micrometer drum screw."

The book is not free from humor: we recommend the following passage to the engineering and financial experts of Wall Street.

"A gives X £500 sterling for a half share in the sixth interest that X holds in a mining claim located at Eureka, Nevada, U. S. A. It is plain to everybody that X has received £500 sterling for the half share of his mining

interest. A, on the other hand, has got for his money an acknowledgment, which, in itself, is a concrete function implying value; and this implied value is dependent on the geological formation of a piece of ground staked out in Nevada, the true value of which A may determine by the aid of a Philadelphia lawyer and a western mining expert. A has received *implicit* value; X got *explicit* value."

The author asserts that this "simple example" makes clear "the whole difference between the arithmetical and algebraic systems."

H. J.

SPECIAL ARTICLES

THE PRESENT STATUS OF THE BACTERIOLOGY OF HUMAN LEPROSY

SINCE the discovery by Hansen in 1872 of an acid-fast bacillus in the leprous lesion to which he ascribed an etiological rôle, numerous investigators have reported success with its artificial cultivation. It may be stated, however, that prior to 1901 the cultures isolated and described by various investigators differed tinctorially and morphologically from the Hansen bacillus of the tissues, and although many of these cultures were said to have induced experimental lesions similar to human leprosy and to have fulfilled other postulates, no one of them has been universally accepted as the specific organism of leprosy.

Kedrowski in 1901 described an organism which he cultivated from the leprous lesion and believed to be the specific bacillus of leprosy. This author reported his culture as a non-acid fast diphtheroid bacillus, which when injected into laboratory animals became acid-fast after a sojourn of weeks in the tissues. He advanced the theory that the acid-fast rods seen in human leprous lesions represent but a stage in the developmental cycle of a single pleomorphic species.

Deycke and Rost and Williams have since reported (1905) upon the successful cultivation from the leprous nodule of an organism similar to that of Kedrowski's together with which they also found streptothricial forms and acid-fast rods.