

Sheffield Scientific School (Holt), contains a five-place table of logarithms and logarithmic factors of all the data which are given. The book commends itself by some features which are novel in laboratory aid of this character. The one fault we have to find with it is a structural one. The first twenty-four pages are cut to facilitate reference to the logarithmic tables, with the result that one turns to the data on these first pages with considerable trouble and vexation.

'Physical Chemistry in the Service of the Sciences,' by Jacobus H. van't Hoff, English version by Alexander Smith (University of Chicago Press), is a small book with a striking portrait of Van't Hoff, of whose genius it is hardly worthy. We read in Mr. Smith's preface that "the lectures were delivered in English," yet the author speaks of the "version here presented" and of "diese englische Ausgabe"; so that we infer that the English of the original needed correction. It is, at least, interesting to see these matters dealt with by this important chemist and physicist.

The Société de Géographie of Paris has just issued, under the legacy of Renoust des Orgeries, the first number of the 'Documents Scientifiques de la Mission Saharienne,' by F. Fourreau, chief of the expedition (Paris: Masson). The astronomical and meteorological observations here presented will be followed by reports on topography, geology, biology, ethnology and archaeology. One must regret that the accounts of the wind and thunder storms, of which many were encountered, are so largely subjective as to give no clear idea of the entire disturbance, in which the observer could, of course, actually feel only a very subordinate part. It may be noted that the legacy of M. des Orgeries is to be applied to the aid of expeditions that are planned to bring the interior of Africa peacefully under the influence of France, and to make a homogeneous whole of her actual possession in Algeria, Senegal, and the Congo territory.

The exigencies of the German alphabet bring together, in volume five of the new edition of 'Meyers Konversations-Lexikon'—'Differenzgeschichte-Erde'—(Leipzig: Bibliographisches Institut; New York: Lemcke & Buechner), wireless telegraphy, the three-plate color process, iron, railroads, precious stones, and electricity in manifold phases even to electrotherapy. These are all illustrated, the color printing in a very interesting way. So are the articles on eggs and evolution; the latter naturally overlapping the plates of embryology. There are excellent maps of Dresden, Düsseldorf, Edinburgh, Elberfeld-Barmen, Elsass-Lothringen, England and Wales; and a chart of earthquakes and volcanoes. Encyclopædias are fitly treated historically. Dreyfus and Dumont rest amicably side by side in print. Frederick Douglass gets a quarter of a page, and a German edition of his autobiography, published in Hamburg in 1860, is cited; but the sketch is not too correct. There is a grave omission of President C. W. Elliot from notable Americans. As an example of what one may find, or expect to find, in this work, we may mention as a dictionary rubric Voltaire's "Ecrasez l'infâme"—a cry much considered in this country for more than one evil element in our body politic.

Prof. Julius Goebel of Leland Stanford

University contributes to the serial publication "Der Kampf um das Deutschum" (Munich: J. F. Lehmann) the latest number, dealing with the German element in the United States. The author gives a readable and interesting sketch of the history of German immigration in this country; of the leading characters in this history from Pastorius to Francis Lieber and Karl Heinzen; and of the present condition, social and intellectual, of the German-American population. His exposition displays a strongly pronounced personality with very decided sympathies and antipathies, so that the reader sometimes finds it difficult to maintain his own equilibrium of mind in perusing these pages. That a patriot like Carl Schurz should be characterized as "ein Mann, der für die Sache des klug von ihm benutzten Deutschums nie etwas übrig hatte, als schadhlose Redensarten," seems to be carrying partisan bias altogether too far. There is, however, a good deal of sound common sense in this book, and the author's insistence on the importance of the preservation of the German language in the interest of American society at large is entirely just.

The principal contents of *Petermann's Mitteilungen*, number one, are an account of the geology of Canada by Prof. H. Haas, an extended notice of the new edition of Stieler's 'Handatlas,' and Dr. K. Vogelsang's narrative of his expedition in central China to investigate the mineral resources of the Ta-pá-shan mountain range. He was led to form an unfavorable opinion as to their extent and richness, the coal being barely sufficient to supply the local demand. Dr. Andersson gives a sketch of the Swedish Antarctic expedition, with a summary of its scientific results.

The modern doctrine that mountain peaks and ridges usually owe their form to the erosion of valleys in broadly uplifted masses of the earth's crust, seldom finds better illustration than in those parts of the Cascade range that are described in recent essays by G. O. Smith and B. Willis (Professional Paper No. 19, U. S. Geological Survey). The mountains are shown to be an uplifted and maturely dissected portion of a broad lowland of erosion which formerly occupied a large area in this region, and of which the less uplifted and therefore less dissected portions are seen in the great lava plains of the Columbia River. The mountains are mountains not by reason of violent and disorderly uplift, as used to be taught, and as still may be believed in many quarters, but by reason of gradual and orderly stream and river work. They give us a good example of the veritable tortoise of uniformitarian erosion not only outstripping but even driving from the field the fabulous hare of catastrophic mountain upheaval. An appropriate corollary to this demonstration is found in the cañon of the Yakima, followed by the Northern Pacific Railroad, where the river has held its course and cut a gorge across several uplifts of the land that must have diverted the river to some other path had they been of rapid origin. Lake Chelan, an unusually deep basin on the eastern side of the Cascades, is ascribed to glacial erosion; but the omission of all mention in this connection of Gannett's noteworthy article on the lake (*National Geographic Magazine*, 1898) is a blemish on an otherwise edifying report.

A recent report from the University of Halle mentions the interesting fact, that this institution was the first in Germany to give the medical degree to a woman, the present year being the one hundred and fiftieth anniversary of that event. It was in 1754 that the University created a daughter of Dr. Leporin of Halle a "Doctor Medicinæ." Her scientific studies had been carried on under the direction of her father, but in the University halls she defended a set of theses that secured her these academic honors. She is no doubt the pioneer of the modern university movement among the women of Germany, having as early as 1742 published a work entitled 'Gründliche Untersuchung der Ursachen, die das weibliche Geschlecht vom Studiren abhalten, darin deren Unerheblichkeit gezeigt wird, und, wie möglich, nötig und nützlich sey, dass dieses Geschlecht der Gelahrtheit sich beleiße.' This first woman doctor of Germany died in 1762. We remark, by the way, that the University of Königsberg, in which the reaction against women students that set in about two years ago in the Prussian universities went so far that the medical faculty practically excluded women entirely, has, in a measure, relented. The medical department now again admits women to anatomical work, but not with the men.

In order to determine the average weight of the human brain, Professor Marchand of the Pathological Institute of the University of Marburg has, during the past seven years, examined 1,234 specimens. It appears that in the case of men between fifteen and fifty the average weight of the brain is 1,400 grammes; in the case of women 1,300 grammes. Only 30 per cent. of the males showed a weight higher than 1,450, and 20 per cent. less than 1,300 grammes. In the case of women, 25 per cent. had brains weighing less than 1,200 grammes, but 55 per cent. had brains weighing from 1,200 to 1,350. The difference in weight is not conditioned by the difference in bodily size, for men and women of the same size and weight show this difference as well as others. Professor Marchand asserts that the weight of the brain at birth is doubled in the first three-quarters of a year, and is trebled before the completion of the third year, after which period the rate of increase is much less. In the case of men, full development is reached at the age of eighteen or twenty; in the case of women, at sixteen or eighteen years. In childhood the ratio of the development of the brain and of the body is the same in males and females, independent of age, until the body has attained a length of 70 centimetres.

Beirut is the seat of the largest American institution of learning outside the United States, the Syrian Protestant College. Our consul reports that there are now 45 professors and instructors, 28 of whom are native Americans and graduates of American colleges, and 667 students. It has five departments, medicine, pharmacy, commerce, arts, and archaeology. Last fall it trebled the size of its chemical laboratory and opened a "model pharmacy" in it. There are fourteen commodious buildings and a campus of about fifty acres. The English language is the principal medium of instruction.

A very comprehensive folding map of the theatre of war in the East has just been issued by the Bibliographisches Institut of

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