

## A GEOLOGICAL BIBLIOGRAPHY OF INDIA.

*A Bibliography of Indian Geology and Physical Geography, with an Annotated Index of Minerals of Economic Value.* Compiled by T. H. D. La Touche. Part i., "A Bibliography of Indian Geology and Physical Geography"; part ii., "An Annotated Index of the Minerals of Economic Value." Pp. xxviii+571 and ii+490. (Calcutta: The Geological Survey of India; London: Kegan Paul and Co., Ltd., 1917 and 1918.) Price, part i., 5s. 4d.; part ii., 6s.

GEOLOGISTS, and especially students of Asiatic geology, owe a debt of gratitude to Mr. La Touche for having prepared, and to the Geological Survey of India for publishing, these two useful volumes, which the printer and paper-maker have made distinctly portly. The first is a bibliography of all that has been published regarding the geology of India and adjacent countries, arranged by authors, with a separate heading for all anonymous writings, and we note that Mr. La Touche has refrained from the needless pedantry of classing those unsigned contributions as anonymous of which the authorship was openly avowed and is well known. The bibliography seems very complete, for a somewhat critical search has failed to discover any omissions and has met with only one error, where two authors, who happen to have the same surname and initials, have had their separate identities merged into one person.

The second volume will probably prove of wider interest, being an annotated index to all published information regarding rocks or minerals of economic value. It is conveniently arranged in alphabetical order of the substances dealt with, and under each heading is given a brief review of recorded occurrences and production where the mineral has been worked, with references to the original authorities enumerated in the first volume. Glancing over this annotated index, we note that the production of diamonds, for which India was especially famed in olden days, had fallen to some 55 carats in 1915, the latest date quoted by Mr. La Touche, and to 18 carats in 1917, the latest date for which returns have been published. The more plebeian form of carbon, known as coal, has become a very important industry in India, and of it more than 18,000,000 tons a year are now mined. Iron, too, has become an important industry, and in 1917 nearly 365,000 tons of pig-iron and steel were produced by the two principal companies concerned in the industry.

The influence of the war on mineral production has been marked; it is apparent even in the work under review, and becomes more noticeable when it is compared with the review of mineral production during 1917. The output of tungsten has nearly doubled, more than 4500 tons of wolfram having been produced in India during 1917, mostly from the Tavoy district of Burma. Vanadium, at

present one of the most keenly sought after of all metals, figures in Mr. La Touche's work by a single reference to the reputed presence of 2 per cent. in the ash of certain lignite of Travancore. Of magnesite, the production has risen from about 400 tons in 1914 to more than 18,000 tons in 1917. Mica, of which 40,000 cwt. had once been produced, fell to 27,000 cwt. in 1915, but the demand for war needs had once more raised the quantity returned as production to more than 40,000 cwt. in 1917; in the same year more than 62,000 cwt. were exported, a discrepancy which gives rise to a naive comment by the Director of the Geological Survey that "there is a thriving trade in mica theft in some of the mining areas, and stolen mica naturally does not appear in the output returns."

Such are some of the reflections which have occurred to us in examining this work, but its real value is as a book of reference. As such it will be invaluable, and the constant standby of all who are in any way concerned with the mineral resources of our Indian Empire, or with the important contributions which it has made to pure geology and the kindred sciences.

## RESEARCH ON WOUNDS OF WAR.

*Ambulance de "L'Océan," La Panne.* Tome ii., fasc. 1. Travaux publiés sous la Direction du Dr. A. Depage. Pp. 376. (Paris: Masson et Cie; London: H. K. Lewis and Co., Ltd., 1918.) Price 18 francs net.

THIS volume contains, in the first half, articles dealing with operative and post-operative methods and results of various wounds in war. In the second half more stress is laid upon the bacteriological aspect and histological appearances of war-injured tissues. In the first article, by Dr. Depage, is a general discussion of excision and delayed primary and secondary suture of wounds. The author deals with the application of this method of treatment to various regions of the body, and lays particular stress on avoiding transverse incisions in the limbs, which, although giving free access, lead to unduly severe loss of tissue and difficulty in suture. The percentage results of success obtained are excellent.

Dr. Depage and Dr. Delrez then report on a series of cases of severe injury to the feet, with or without involvement of the bones and joints. Very good photographs and radiographs show the wounds of some of the more severe in the various stages and the final results. The authors strongly recommend the removal of the astragalus to assist in the early drainage, and very complete inversion until the tissues are clean, after which the surfaces are approximated and fixed with wire sutures.

Dr. Delrez contributes a long article upon that most controversial subject—wounds of the knee-joint. After discussing the indications for immediate amputation, he gives examples and figures of a large number of cases, dividing them into classes according to the extent and nature of

injury to the neighbouring bones. He finds that the limit of conservative operation is when there is an injury of the patella and condyles at the same time, and recommends resection and fixation for permanent ankylosis. The rest of the article discusses wounds of the ankle and wrist, elbow and shoulder, and also the treatment of septic arthritis that supervenes when the original excision of the wound fails to attain primary union. Dr. Neuman then contributes the results of laparotomies performed from June, 1915, to March, 1918. He begins with a short historical review of the treatment of abdominal penetrating wounds, and then shows the personal statistics, which clearly emphasise the importance of an advanced post for laparotomies. The article then contains a detailed classification of the different types of abdominal wounds, with the appropriate treatment for each type and the statistical results. The article by Dr. Janssen contains a valuable review of the history of cranio-plastic operations, and a detailed account of his own method of cartilaginous or osteoperiostic heteroplastic grafts and the after-results.

Prof. Dustin contributes an article on the fasciculation of the various nerves of the arm and cervical plexus, and points out the importance of the arrangement of the fibres in estimating the prognosis of total section. Dr. Harde reports the relative frequency of the tetanus bacillus and other anaerobic organisms in a large series of wounds, and shows that very few cases ever develop clinical manifestations of the organisms, although they can be bacteriologically identified from the tissues. Further contributions on microbic growth and the mechanism of elimination of organisms from the circulation bring us to the last and longest article, by Prof. Levaditi.

This is a critical investigation into the effects of streptococcal invasion. The sections are arranged as follows: (1) The method of invasion, early and late; (2) the morphological and cultural characteristics of the different types discovered; (3) the reasons why clinical manifestations do not necessarily follow invasion; (4) hypersensibility and acquired immunity arising during the period of infection; (5) the effects of vaccination. Many charts of individual patients and details of their treatment and complications illustrate this important research.

The whole production is excellently printed and illustrated, and contains important contributions to some of the most intricate of war problems.

L. J. AUSTIN.

#### OUR BOOKSHELF.

*Faith in Fetters.* By the Rev. T. R. R. Stebbing. Pp. 223. (London: T. Fisher Unwin, Ltd., 1919.) Price 6s. net.

THE author, a veteran naturalist of distinction, a great authority on Crustaceans, has here raised a protest against the continuance of superstition in modern theological doctrines and religious conceptions. The conventionally orthodox attitude to

the Bible is an anachronism. But he tilts too often against windmills, and there is more than a hint of wooden literalism in the examples he gives of Biblical contradictions and of anthropomorphisms which have become grotesque. The science of literature and of folklore has surely changed the educated man's attitude to the Bible much more than Mr. Stebbing's mode of treatment would suggest. The Thirty-nine Articles do not fare much better at his hands than do the Scriptures, for they are redolent with impossible anthropomorphisms. To take these literally may be superstitious, but it is surely possible to read them sympathetically as historical survivals. A theological or philosophical idea may be living and useful, though its particular form has grown musty.

From internal evidence the author shows that "the supposed inspiration and consequential infallibility of the Old Testament Scriptures rests on no solid foundation." But it seems to us that in his prosaic, unscientific treatment of the literature in question Mr. Stebbing leads his readers into a way of looking at things not less erroneous than a belief in "inspiration." If the author thinks that Church councils should make clear that they officially accept the scientific view of the Scriptures which the best modern scholars have expounded and many humble, clear-headed preachers adopt every Sunday, we are with him; but it should surely be possible to get rid of superstition without jettisoning imagination.

*Le Tube Coolidge. Ses Applications Scientifiques, Médicales et Industrielles.* Par H. Pilon. Pp. iii+83. (Paris: Masson et Cie, 1919.) Price 4 francs net.

M. PILON has written an interesting and timely brochure upon the Coolidge X-ray tube. He first enters into a description of the three types of these tubes which are available at the present time, namely, the standard tube, the first model of the inventor and the one ordinarily used; *Modèle A*, in which attention is especially directed towards the production of a very fine focus on the anti-cathode; and, lastly, the radiator type of tube, which was designed to meet the special requirements of the American Army Medical Service; this tube is a beautiful example of the inventive genius of Dr. Coolidge, the diameter of the tube being reduced to as little as 8 cm.

The second part deals with the radiation emitted by the tubes, the data being selected from the work of Coolidge and Moore, de Broglie, and others; a number of well-chosen illustrations exhibit the conditions necessary for clearness in radiographic images.

The concluding section is, for the main part, a reply to various criticisms which have been passed upon the performance of the Coolidge type of tube. A small section is devoted to the industrial applications of X-rays, and a final word is wisely said as to the necessity for the adequate protection of operators against the powerful and penetrating radiation from the modern X-ray tube.