

## EXPLORATION AND TRAVEL.

## The Kongo Free State.

CAPTAIN THYS, on his return from Africa, delivered some very interesting lectures on the state of affairs on the Kongo, which were recently published in the form of a pamphlet. The following notes are taken from this publication. The establishment of easy communication between the upper and lower Kongo is of vital importance for the development of western Central Africa: therefore the Kongo Industrial and Trading Company has taken active measures for the establishment of good roads. A few months ago an expedition was sent out to study the feasibility of a railroad leading to Stanley Pool. After five months of hard work, a hundred miles of the proposed road were surveyed. The whole district to be traversed by the road was mapped on a scale of 1:2,500, with five-metre contour-lines. After this work was completed, the expedition, which is commanded by Captain Cambier, proceeded inland to make a reconnaissance and survey of the upper part of the road. After this preliminary survey has been made, the line will be located and resurveyed. It is expected that this work will be completed this year, and the company expects to make its detailed plans and estimates in the beginning of next year. So far, no serious difficulties have been met with. As the railroad will not be completed for a few years, the company has made an attempt to organize regular caravans for carrying the trade between Matadi and the Pool. At present sixty thousand loads of sixty-five pounds each are transported by carriers through the district of the cataracts. As this method of transportation is expensive and unsafe, it has been proposed to use cattle instead of men. With this aim in view, attempts have been made to raise cattle, and have been found to be successful; and it is hoped that by this means the cost of transportation will be greatly diminished. While the railroad is being surveyed, M. Delcommune has been sent on a commercial reconnaissance of the upper Kongo. In March he started on the steamer 'Roi des Belges' up the Kassai. The pamphlet is accompanied by a sketch-map of the Kongo Free State, by A. T. Wauters, showing the present state of our knowledge of this vast territory. A number of special maps show the situations of the important stations and the route along the Kongo from Matadi to Leopoldville.

THE KASSAI. — The observations of Captain Thys on the Kassai, and its principal tributary the Lulua, have been published by the Institut National de Géographie at Brussels in the form of a large map on a scale of 1:200,000. The map is mainly intended for the use of steamers going up and down the Kassai and Lulua, and the notes on the character of the rivers and their banks have been carefully compiled from the observations of Captain Thys and of Wissmann. While this map is particularly valuable on account of the large amount of detail it contains, Dr. B. Hassenstein's map of the Sankuru, which was published in the July number of *Petermann's Mittheilungen*, must be considered one of the most important contributions to the geography of Africa. In it the surveys of Dr. Ludwig Wolf in 1886, and those of Wissmann and François in 1884-85, have been made use of. The astronomical observations of these travellers have been carefully scrutinized, and the final results obtained by Hassenstein must be considered the most probable, considering the present state of our knowledge. The construction of the upper part of the Lulua is based upon the longitude of Mukenge, near Luluaburg, which has a probable error of  $\pm 7'$ . The barometer observations have been reduced, and a great number of elevations are contained in the map. The scale of the latter is 1:600,000, and a considerable amount of detail is given. The great value of this publication becomes obvious when comparing it with the preliminary maps compiled from the surveys of these travellers.

## BOOK-REVIEWS.

*A Guide to the Study of the History and the Constitution of the United States.* By WILLIAM W. RUPERT. Boston, Ginn. 12°.

THE first part of this book presents a selection of topics covering the whole period of American history, and accompanied by a numerous list of authorities, the whole being designed as a guide to

young students. The author remarks in his preface that "young persons are incapable of distinguishing between important and unimportant historical facts," and therefore need guidance in the study of such facts. This is undoubtedly true; but unfortunately Mr. Rupert is not always successful in making the required distinction himself, for he gives altogether too much attention to military affairs, and too little to some political and social events of far greater importance. In other respects, however, his work is well done. The second part of the book is a brief exposition of the Constitution, giving an explanation of its provisions, and in some cases the reasons why they were enacted. The decisions of the Supreme Court on questions of constitutional law are not given, probably because they were deemed somewhat beyond the province of a schoolbook; but the author's exposition, so far as it goes, seems well adapted to the wants of students in the high schools.

## NOTES AND NEWS.

IN the *Overland Monthly* for September is a short paper on orange-culture, by Mr. Adolphe Flamant of Napa; the Grand Cañon of the Colorado is described by Mr. J. G. Lemmon, botanist of the State Board of Forestry; and among the short stories is 'A Question of Will-Power, a Psychological Study,' by A. G. Tassin. — Ginn & Co. announce 'The Elements of Plane Analytic Geometry,' by John D. Runkle, professor of mathematics, Massachusetts Institute of Technology, as in press. They also invite attention to Taylor's 'Calculus' (differential and integral, in one volume), lately adopted by the Massachusetts Institute of Technology. — 'The Relation of the Sexes to Government' will be discussed by Prof E. D. Cope in the October *Popular Science Monthly*. The differences between the two French schools of hypnotism will be set forth by Dr. Christian A. Herter, under the title 'Hypnotism: What it is, and What it is not.' Under the title 'Ethics and Economics,' Mr. Robert Mathews will give a thoughtful view of our social outlook. — Henry Carey Baird & Co. will publish on Sept. 15 a new book on steam-engineering, entitled 'The American Steam-Engineer, Theoretical and Practical,' by Emory Edwards, the well-known author of 'The Practical Engineer's Guide,' etc. The author in the forthcoming book will give examples of the latest and most approved American practice in the design and construction of steam engines and boilers of every description. — The J. B. Lippincott Company will publish on Sept. 14 the second volume of the new edition of Chambers's Encyclopædia, from Bea to Cat. The same thorough revision and accuracy that characterize the first volume are also found in the second. It contains 828 pages, is profusely illustrated with new woodcuts, and supplied with maps of Belgium, Burma, California, Dominion of Canada, Eastern Provinces of Canada, Cape Colony, and South Africa. They will begin at once the publication of a series of biographical studies of the great men who have influenced the social and political history of the world, under the general title of 'International Statesmen Series.' It is to be edited by Mr. L. C. Sanders, and its scope will be comprehensive, embracing the ancients and the moderns, and including not only the creators of the English Commonwealth, but also the makers of European and American politics, and the founders of the Indian and Colonial Empires. The initial volume of the series is 'Lord Beaconsfield,' by T. E. Kebbel, author of a 'History of Toryism.' — Messrs. Trübner & Co., London, announce 'The Literature of Egypt and the Soudan,' by H. H. Prince Ibrahim-Hilmy; 'Mediæval Researches from Eastern Asiatic Sources,' by E. Bretschneider, M.D.; 'Table of Quarter-Squares of all Numbers from 1 to 200,000,' calculated by Joseph Blater; 'Bibliography of South Australia,' compiled by Thomas Gill; and 'Manual of New Zealand History,' by J. Howard Wallace.

— During the total eclipse of the moon on Jan. 28, 1888, Prof. W. H. Pickering searched, by means of photography, for a lunar satellite. The results of his observations have been published in the 'Annals of Harvard College Observatory.' The method of observation was to direct the telescope, with the camera attached to it, towards the moon, and to adjust it so as to follow the motion of the latter. The effect is, that the stars are represented as short lines, while any satellite, whose motion would probably be in accordance with that of the moon, would appear as a point or a line