

burial, and the funeral festival among the Dajaks; and one in English, by Prof. H. H. Giglioli, on a singular obsidian scraper used at present by some of the Galla tribes in southern Shoa.

— Mr. Charles Hallock, the founder of American journalism on field and water sports, and one of the most eminent writers on outdoor life, is now permanently associated in the editorial conduct of *The American Angler*.

— Harper & Brothers have just published Stanley's letters, telling the story of Emin's rescue, accompanied by illustrations and a map showing the traveller's route from the Kongo to the coast. Sir William Mackinnon, chairman of the Emin Pasha Relief Committee, adds some interesting material to the volume. It is of course understood that this book will not in any way trench upon Mr. Stanley's great work, which cannot possibly be published for several months.

— The J. B. Lippincott Company publish this week "A Conversation on Mines Between Father and Son," a lecture on the atmosphere and explosive gases by William Hopton, to which are added questions and answers to assist candidates to obtain certificates for the management of collieries; and "A Text-Book of Assaying," by J. J. and C. C. Beringer, for the use of students, mine managers, etc.

— D. Lothrop Company publish this week a little volume addressed to all workers with hand and brain, entitled "The Shop," devoted to the possibilities and probabilities of social, home, church, and political reform, by Albert E. Winship, editor of the *Journal of Education*.

— The second report of the committee appointed by the British Association to inquire into, and report upon, the present methods of teaching chemistry, which was presented at the Newcastle meeting, and to which attention was called in *Nature* a short time ago, has now been put on sale by the Council. It may be obtained from the office of the Association, 22 Albemarle Street, London, W.

— A new fortnightly scientific periodical is about to be published in Paris. It will be entitled *Revue Générale des Sciences Pures et Appliquées*, and will deal with the mathematical, physical, and natural sciences, and with their applications in geodesy, navigation, engineering, manufactures, agriculture, hygiene, medicine, and surgery. According to the preliminary statement, the new periodical will take as its model the method of exposition adopted in *Nature*. The editor is M. Louis Olivier, and the list of contributors includes many of the most eminent French men of science. The first number will appear on January 15, 1890.

— In the article which Herbert Ward will contribute to the February *Scribner's*, on "Life Among the Congo Savages," there will be an account of the human sacrifices which take place on the death of an African chief. Mr. Ward's article is to be a description of the manners and customs which prevail in that region which Stanley has opened to commerce. Colonel W. C. Church, in his first article on John Ericsson, in the same number, relates that, as the last hour in the life of the great engineer was drawing to its close, he called to his bedside his faithful friend and secretary, and, looking into his face with a smile, said: "Taylor, this rest is magnificent; more beautiful than words can tell." William Henry Bishop, the American novelist, tells in the February *Scribner's* of a recent visit to Galdós, the author of "Doña Perfecta," in his Madrid home. "He came into the room with a hard-at-work air and a cigarette between thumb and finger. He is a dark, slender man, of good height, rather loose-jointed, forty-four years old, and with a young look." Galdós, it is said, has had himself elected to the Chamber of Deputies in order to have a chance to study legislative manners at first hand for literary material. W. H. Mallock, author of "Is Life Worth Living?" who has written for the number an article on Hungarian castles — the fruit of a recent visit to that country — says: "Hungary still remains a very interesting study; and though it may at first disappoint those who expect to find in it castles and peasants like the back scene of an opera, it retains enough of the substance, if not of the surface, of the past to throw a considerable light on what has really been achieved, in the

way of changing or bettering the conditions of life generally, by that extraordinary movement which we especially associate with the present."

— The article which is likely to attract most attention in the January number of the *New England Magazine* is that on "The New England Meeting-House and the Wren Church," by Mr. A. R. Willard. Mr. Willard shows how Sir Christopher Wren, who was rebuilding the sixty or seventy London churches, after the Great Fire in 1666, just as our New England fathers were getting able to build meeting-houses with towers and steeples, set his stamp upon our entire church architecture, in city and country, almost from that time to this. The article is illustrated with pictures of Wren's steeples and of our own old meeting-houses. The other illustrated articles are on Montreal in Winter, and the Boston Musical Composers. Professor Jameson of Brown University, in a paper entitled "Did the Fathers Vote?" shows, in a way that is gratifying to those who believe in progress, that however neglectful we are of our political duties, we are in this respect ahead of our fathers in the "good old times" that the croakers talk about. Mr. William F. Dana writes about the Behring Sea Controversy. Mrs. Nina Moore Tiffany begins a series of "Stories of the Fugitive Slaves," telling here of the escape of William and Ellen Craft. Edward Everett Hale, in his "Tarry at Home Travel," talks this month about the Boston Parks and about Concord. Edward Everett Hale, jr., contributes a chapter of colonial history, under the head of "Edward Bendall and the 'Mary Rose.'" "Candlelight in Colonial Times" is another bit of New England history. Browning receives notice in two articles, one by Mr. Robert Niven of London, on "Browning's Obscurity," the other by Miss H. E. Hersey, on "Browning in America," the latter accompanied by a portrait from a recent London photograph. There is an "Old South Lecture" on "Thomas Jefferson and the Louisiana Purchase," by one of the young Old South essayists, Robert Morss Lovett, now a student in Harvard College.

LETTERS TO THE EDITOR.

* * * Correspondents are requested to be as brief as possible. The writer's name is in all cases required as proof of good faith.

The editor will be glad to publish any queries consonant with the character of the journal.

On request, twenty copies of the number containing his communication will be furnished free to any correspondent.

A New Telephone Invention.

WE see by a late number of the *New York Electrical World* that two Canadian gentlemen have made the important discovery that telephone trunk lines may be duplexed the same as telegraph wires. This has hitherto been considered impossible on account of the great dissimilarity between telegraph and telephone currents. It is on this account chiefly that long-distance telephony is more expensive than telegraphy, as only two persons can use the same wires at the same time. By means of the new invention it is claimed that four persons can use the same wires simultaneously and without the least interference. Advantage is taken of the double wire system now in general use on inter-urban trunk lines. Transmitters and receivers are used with double coils, and the apparatus is connected with both branches of the double-wire trunk line. One set of transmitters generates electrical impulses in the two wires in opposite directions, while the other set generates impulses in the two wires in the same direction. By means of these reversing coils one set of apparatus will actuate and be actuated by a set similarly connected, while, on the other hand, it will not affect nor be affected by apparatus with coils dissimilarly connected. In the one case the electrical impulses move only in the metallic circuit formed by the two wires of the trunk line. In the other case the circuit is completed through the subscriber's ground wires. If this invention is found to work as satisfactorily in actual practice as it is claimed to work experimentally, it will necessarily very materially reduce the working expense of long-distance telephone lines.

R.

Toronto, Ont., Jan. 9.