

past twenty years, in America or elsewhere, except the subdivision was based on the fossil contents.

There is not space in a scientific journal to review the ponderous volumes of the Survey, but I do not discover any attempt to make a geological survey of the United States or of the Territories; but instead thereof, the volumes contain theoretical discussions about the glacial period, that have no economical value, and which period, I think, is fiction, and they contain a vast amount of extremely localized and temporary matter of no general utility. This is well illustrated in the Seventh Report now before me. One of the principle articles is entitled "The Geology of the Head of Chesapeake Bay." It covers more than one hundred pages, has sixteen plates and six additional illustrations. The author says:

"The investigation here recorded was made under the joint auspices of the U. S. Geological Survey and the U. S. Fish Commission, for the purpose of determining the probable success of an artesian boring at Fishing Battery station, off Spesutie Island, five miles south of Havre de Grace, Md., and near the head of Chesapeake Bay. The field-study occupied a portion of July, 1886."

The article is so free from geology and so extremely localized that I have been unable to discover the object in publishing it in the U. S. Geological Survey. The author, however, says, on page 564, under the head of "The Geologic Exposures":

"So variable are the different formations of the region in the several exposures that the differences exceed the resemblances, and, since the local diversities are due to local causes the characteristics of the formations cannot be elucidated by generalized description with sufficient minuteness for the purposes of the local student."

Another one of the principal articles, hugely illustrated, in the Seventh Report is entitled "Report on the Geology of Martha's Vineyard." I have looked through it, in vain, to find an item of geological information. It would certainly take the cake in any walk where pretension and nothingness were to be the winners.

In conclusion, I am opposed to the continuation of the U. S. Geological Survey, under the present management, because, I think, it is not prosecuted in the interest of science but quite the contrary, and because the publications now hang, like a millstone, around the neck of progress, in the dissemination of geological information among the people.

S. A. MILLER.

Cincinnati, Ohio, Jan. 23.

Monument to Hirn.

In a letter, just received from Mon. G. Kern, President of the Commission established for the purpose of securing the erection of a monument to his late distinguished friend and colleague, Mon. G. A. Hirn, the great engineer-physicist and investigator, on account of which subscriptions have been received in considerable amounts, both in Europe and America, he writes as follows:—

"The monument proposed for Hirn, and of which the plans were made by Mon. Bartholdi, will consist of a bronze figure, seated, with pedestal, and will cost about 30,000 M. To complete the subscription, there still remains a balance of 10,000 M., and I have knocked at the doors of many friends and acquaintances of Hirn, finding welcome, in Paris and in Bordeaux; I anticipate full success."

It has been the hope of the gentlemen engaged in this enterprise that a fair proportion of the subscription might come from citizens of the United States of North America, among whom Mon. Hirn counted some personal friends, and many warm admirers. He was always peculiarly appreciative of such good will and such praise of his work as came to him from this side of the Atlantic. Those who desire the privilege of contributing may send their drafts on Paris to the "Comité-Hirn," I Obstmarkt, Marché aux Fruits, I, Colmar, Alsace.

Very respectfully yours,

R. H. THURSTON.

Ithica, N. Y., Jan. 25, 1893.

CALENDAR OF SOCIETIES.

Society of Natural History, Boston.

Feb. 1.—H. L. Harris, A New Instance of the Capture of Streams; W. T. Sedgwick, The Natural History of Disease.

Publications Received at Editor's Office.

- ANDERSON, W. Mineral Springs and Health Resorts of California. San Francisco, The Bancroft Co. 384 p. 8°.
- BEECHER, H. W. Bible Studies. Edited by J. R. Howard. New York, Fords, Howard & Hurlbert. 438 p. 12°. \$1.50.
- DANA, EDWARD SALISBURY. Catalogue of American Localities of Minerals. New York, Wiley. 51 p. 8°. \$1.
- DE MOTTE, J. B. The Secret of Character Building. Chicago, S. C. Griggs & Co. 130 p. 12°. \$1.
- DREYSPRING, A. French Reader on the Cumulative Method. New York, Amer. Book Co. 171 p. 12°. 75 cents.
- HOLMAN, SILAS W. Discussion of the Precision of Measurements. New York, Wiley. 176 p. 8°. \$2.
- HOREY, HENRY T. Theory of Structures and Strength of Materials. New York, Wiley. 817 p. 8°. \$7.50.
- HUTCHINSON, H. N. Extinct Monsters. New York, Appleton. 254 p. 8°.
- PARSHALL, N. C. Proofs of Evolution. 5th 1000. Chicago, Chas. H. Kerr & Co. 70 p. 12°.
- PRET, S. D. The Mound Builders: Their Works and Relics. Chicago, The American Antiquarian. 376 p. 8°.
- SHALER, N. S. The Interpretation of Nature. Boston, Houghton, Mifflin & Co. 305 p. 12°. \$1.25.
- STYX. Hermetic Philosophy. Vol. III. Can Virtue and Science be taught? Philadelphia, Lippincott. 221 p. 12°. \$1.25.
- SYKES, JOHN F. J. Public Health Problems. New York, Scribner. 370 p. 12°. \$1.25.
- THE SONG BUDGET, The Song Century, The Song Patriot. Syracuse, C. W. Bardeen. 12°. 50 cents.
- WEYL, THEO. The Coal-Tar Colors. A Sanitary and Medico-Legal Investigation. Preface by Professor Sell. Tr. by H. Leffmann. Philadelphia, Blakiston. 154 p. 8°. \$1.50.
- WHITBY, BEATRICK. In the Suntime of Her Youth. New York, Appleton. 365 p. 12°. 50 cents. Paper.

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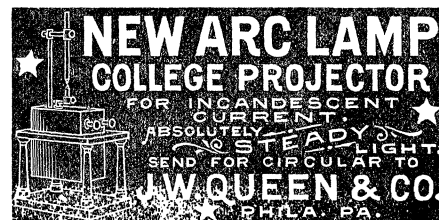
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"Breathing Wells" in Missouri.

I WOULD like to refer those interested in the subject recently presented in your columns (Dec. 16 and Jan. 13) to notes on such wells in Nebraska, published in the *American Naturalist*, April and May, 1883. The conclusions there presented harmonize with those demonstrated by Mr. Willard and Professor Sweezy.

The tendency of such wells to freeze was first brought to my knowledge in connection with some that occur near Mt. Leonard and Marshall, in Saline County, Missouri. They are frequent in what I take to be an ancient channel of the Missouri River, which has become filled, largely with sand. I was assured by several persons directly acquainted with the facts, one of them experienced in putting in and repairing pumps, that in such "blowing wells" pumps not infrequently froze to the depth of 70 or 80 feet below the surface, and in one case ice had been found in a pump cylinder 100 feet down, which was about 10 feet above the water. In all these cases the reservoir of confined air is in an extensive deposit of dry sand connecting with the outer air through the mouth of the well.

J. E. TODD.

Vermillion, S.D., Jan. 24.

BOOK-REVIEWS.

People of Finland in Archaic Times. Compiled by J. C. BROWN, LL.D. London, Kegan Paul, Trench, Trubner, & Co. 290 p. 8°.

BR. BROWN has in view the compilation of a series of volumes on the ethnography of northern Europe, prepared for popular study, of which this is the first. It is principally composed of extracts and abstracts from the Finnish national epic, the Kalevala, and some additional material is obtained from other sources. The whole forms an excellent popular introduction to the study of this ancient and remarkable poem, and enables the reader to understand the cultural condition of the people among whom it originated.

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The undersigned has the following specimens to exchange for crystals of any eastern or foreign localities or Indian relics: tin ore, metacinnabarite, stibnite, garnierite, calenante, hanksite, ulexite, rubellite, lepidolite, blue and green onyx, Cal. pine-ite, aragonite on chalcedony, cinnabar, double refracting spar, clear and clouded, and others. J. R. Bush, care of General Delivery, Los Angeles, Cal.

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For exchange. — Minerals, fossils, F. W. shells, land shells, native woods, Indian relics, two vols. of Smithsonian reports, odd numbers of scientific magazines, copper cents, etc., for good minerals not in my collection, good arrow- and spear-heads and natural history specimens of all kinds. Correspondence solicited with list of duplicates. G. E. Wells, Manhattan, Kan.

For sale or suitable exchange. — A spectrometer made by Fauth & Co., Washington, D. C., according to the plan of Prof. C. A. Young. This instrument is suitable for the most advanced investigations and determinations. Cost originally \$700 and has been used but little. Will be disposed of at a considerable reduction. Address Department of Physics, Ohio University, Athens, O.

I will send British land and fresh-water shells in return for those of America, any part, sent to me. I have at present about fifty or sixty species, with many varieties. W. A. Gain, Tuxford, Newark, England.

The Biological Department of Hamline University desires to offer microscopic slides of animal tissues, or whole animals, in exchange for first-class fossils. Address correspondence to Henry L. Osborne, Hamline University, Hamline, Minn.

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Dr. Brown is inclined to assign the date of the construction of the poem in its present form to about 1100 A.D. Doubtless, however, a great part of it is many centuries older, and the myths and legends which it embodies are referable to an ancient, prehistoric period, before the separation of the western Ugrian stock into its various existing branches.

AMONG THE PUBLISHERS.

"HIGHWAYS and Byways of Europe" is the title of a volume translated from the French of M. Jules Michelet by Mrs. Mary J. Serrano and published by the Cassell Publishing Company.

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— "The Principles of Rank among Animals," by Professor Henry Webster Parker, is the title of a paper read before the Victoria Institute, London, Dec. 5, 1892. It is a condensed digest, under eighteen heads of remark, of the recognized principles that determine grade, and with incidental reference under each to man's zoological position, but without touching the question of his origin. A distinction is emphasized by the author between anatomical and zoological position, as illustrated, for example, in the three sub-classes of birds, which are based far more upon mode of life than upon any morphological differences; also by the rank given to singing-birds as justified by the function far more than the anatomy of the syrinx. The ideal is still recognized in zoology, as in bird, fish, and insect; the ideal of man is the antithesis of that of anthropoids; and by nearly every principle of zoological rank he is shown to have a place quite apart, and in some respects less near to anthropoids than to animals lower in grade.

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