

"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.

Dyspepsia

Dr. T. H. Andrews, Jefferson Medical College, Philadelphia, says of

Horsford's Acid Phosphate.

"A wonderful remedy which gave me most gratifying results in the worst forms of dyspepsia."

It reaches various forms of Dyspepsia that no other medicine seems to touch, assisting the weakened stomach, and making the process of digestion natural and easy.

Descriptive pamphlet free on application to
Rumford Chemical Works, Providence, R. I.

Beware of Substitutes and Imitations.

For sale by all Druggists.

Exchanges.

[Free of charge to all, if of satisfactory character.
Address N. D. C. Hodges, 874 Broadway, New York.]

For sale or exchange. — I have a few copies of my translation of "Strasburger's Manual of Vegetable Histology, 1887," now out of print, which I will send post-paid for \$3 or for one dozen good slides illustrating plant or animal structure. Address A. B. Hervey, St. Lawrence University, Canton, N. Y.

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.

For sale or exchange. — A private cabinet of about 200 species of fossils, well distributed geologically and geographically. Silurian, about 40; Devonian, about 50; Carboniferous, about 80; others, about 30. Frank S. Aby, State University, Iowa City, Ia.

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.

Kindly mention "Science" in writing to Advertisers.

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.

— Miss Kate Marsden's book, "On Sledge and Horseback to the Outcast Siberian Lepers," the Cassell Publishing Company will soon have ready. Ever since Miss Marsden began her work among the outcast lepers of Siberia the world has been ready to read her own story of her adventures and experiences.

— "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.

Wants.

WANTED.—American Journal of Conchology, seven volumes. Parties having these for sale will please address the undersigned, stating condition and price. R. Ellsworth Call, Louisville, Ky.

A GRADUATE ENGINEER will give instruction evenings in geometry, trigonometry and surveying, mechanics, physics, mechanical drawing and general engineering construction. Five years' experience in field and editorial work on engineering journal. References furnished. C. S. H., 102 Tribune Building, New York.

WANTED.—By well-qualified and experienced science master and associate of the Royal School of Mines, London, aged 26 (at present in England), a mastership in technical college or university for any of the following subjects: Engineering sciences, geology and mineralogy, physics, chemistry and metallurgy, etc., etc. Can provide excellent references and credentials. Apply, J. G., 17 Sussex St., Rochdale, England.

A GRADUATE of the University of Pennsylvania and a practical mineralogist of twenty years' experience desires to give his services and a cabinet of 25,000 specimens, all named, with about the same number of duplicates, in minerals, crystals, rocks, gems, fossils, shells, archaeological and ethnological specimens and woods to any institution desiring a fine outfit for study. The owner will increase the cabinet to 50,000 specimens in two years and will act as curator. Correspondence solicited from any scientific institution. J. W. Hortter, M.D., Ph.D., San Francisco, Cal., General P. O. Delivery.

THE RADIOMETER.

By DANIEL S. TROY.

This contains a discussion of the reasons for their action and of the phenomena presented in Crookes' tubes.

Price, postpaid, 50 cents.

N. D. C. HODGES, 874 Broadway, N. Y.