



PICTURE WRITING

And the method of its removal from the bottom of a future lake for study. The watch indicates the comparative size of the symbols.

on for a year and a half during which time 65 groups of ancient rock writings have been taken from the river. Many of the rocks weighed hundreds of pounds and had to be chiseled away above dangerous rapids.

More than 300 complete pottery vessels and many other objects were also taken from the area of the rock writing. Valuable archaeological data were collected and many charts, and molds of the picture writing were made.

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ECONOMIC ZOOLOGY

Eugenie Hats Demand Feathers; Ostrich Breeding is Revived

EMPRESS EUGENIE hats, and other feather-decorated feminine headgear now sweeping into fashion, have resulted in a sudden revival of the ostrich-breeding industry that had all but died out in South Africa.

So low had the industry fallen that there are now only about 13,000 birds in this district, and with breeding going on at a capacity rate it is estimated that it will take at least two and one-half years to bring the number up to 50,000, and at least fifteen years to reach the

METALLURGY

Ultra-Violet Light and High Frequency Current Harden Steel

Use, Other Than in Dentistry, of Some 8,000,000 Precious Alloys, Also Urged Before Steel Treating Society

HARDENING the small metal parts of typewriters, sewing machines, and the like may be speeded up by the use of high-frequency radio currents, ultraviolet light, and the electric spark, according to a report presented by John J. Egan, research metallurgist of Long Island City, N. Y., before the American Society for Steel Treating, in Boston.

The steel is given this desired "case hardening" by nitriding, Mr. Egan explained. This previously has been a slow process, involving the heating of the steel while it is placed in a nitrogen atmosphere. After many hours of heating in contact with the nitrogen gas, it is cooled and its surface or "case" has become hardened.

But by subjecting the metal to ultraviolet light or to electrostatic fields caused by the electric spark or high-frequency radio currents, nitriding is speeded up and hard satisfactory cases are made in a short time, he reported. While Mr. Egan does not believe these methods to be commercially applicable at the present time, he thinks that further experimentation should make them so.

Alloys of precious metals should

prove useful in other fields than dentistry, the society was told by Prof. R. C. Brumfield, of Cooper Union, New York City.

Gold, silver, platinum, palladium, and other rare elements, when alloyed with the baser metals, have service qualities that can be known only by actual experimentation, according to Prof. Brumfield. It is estimated that eight million combinations are possible, each with its unique characteristics. Only a few of them have ever been developed, and these have been used in dentistry. The resistance of these alloys to discoloration and their possibilities for heat treatment recommend their use elsewhere, Prof. Brumfield said. The ultimate strength of some of these metals is as much as 90 tons per square inch. The strength of steel ranges from 50 to 100 tons per square inch.

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ARCHAEOLOGY

American Archaeologists Make Finds in Italy

THE FIRST non-Italian expedition to be granted permission to do archaeological excavating in Italy reports great success after less than one month's work. Dr. Jotham Johnson, field director of the University of Pennsylvania Museum's expedition to Minturno, Italy, reports to Horace H. F. Jayne, director of the Museum, the discovery of a remarkable series of architectural terra cottas dating from the third to first centuries B. C., as well as a fine sculptured head of the Emperor Tiberius and a statue of the Emperor Augustus.

No less than eighty inscriptions have also been found, but for the most part these were built into walls of a later temple, and have not yet been read. A late mosaic landscape of the Nile has also been unearthed by Dr. Johnson.

This "dig" at Minturno marks the first time in history that a foreign institution has been permitted to work in the Italian field, and permission was due

pre-war total, which was 300,000 birds.

Before the present boom six-month-old ostrich chicks sold for about \$5, but today there are few for sale at any price; some ordinary flock birds are selling for \$20 each, while breeding birds bring as high as \$75 a pair. Incubators that have been idle for years are being repaired to receive batches of eggs.

So badly had the ostrich feather industry fallen off that only seventy sorters of feathers could be mustered.

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