

The Courage to Predict

properties of unknown elements from the general Periodic Law was characteristic of

MENDELEEFF

(or Mendeleev)

whose specifications for elements and their compounds then undiscovered forms the next

CLASSIC OF SCIENCE

charge themselves if this plate is positively electrified, either by being in metallic connexion with the positive electrode of the lamp or with a separate positively charged body. When the plate is simply insulated the stream of negatively charged carbon molecules brings down this insulated plate to the potential of the base of the negative leg, or to the potential of that part of the carbon conductor from which it is receiving projected molecules. These carbon molecules projected from an incandescent conductor can carry negative charges, but either cannot be positively charged, or else lose a positive charge almost instantly when projected off from the conductor. . . .

SPACE TELEGRAPHY, Lee de Forest, U. S. Patent No. 879,532, Patented Feb. 18, 1908.

D REPRESENTS an evacuated vessel, preferably of glass, having sealed therein three conducting members, F, *a* and *b*, in the figure. The conducting

member or electrode F is shown as consisting of a filament, preferably of metal, which is connected in series with the battery A or other source of electrical current of sufficient strength to heat said filament, preferably to incandescence. The conducting member *b*, which may be a plate of platinum, has one end brought out to the terminal 3. Interposed between the members F and *b* is a grid-shaped member *a*, which may be formed of platinum wire, and which has one end brought out to the terminal 1. The local receiving circuit, which includes the battery B, or other suitable source of electromotive force, and the signal indicating device T, which may be a telephone receiver, has its terminals connected to the plate *b* and filament F at the points 3 and 4 respectively. The means for conveying the oscillations to be detected to the oscillation-detector, are the conductors which connect the filament F and grid *a* to the tuned receiving circuit and, as shown, said conductors pass from the terminals 2 and 1 to the armatures of the condenser C.

I have determined experimentally that the presence of the conducting member *a*, which as before stated may be grid-shaped, increases the sensitiveness of the oscillation detector and, inasmuch as the explanation of this phenomenon is exceedingly complex and at best would be merely tentative, I do not deem it necessary herein to enter into a detailed statement of what I believe to be the probable explanation.

Science News Letter, October 24, 1931

Geological Moving Days

From Page 263

Alps, there was no glaciation in Asia. All of Manchuria, Mongolia, eastern Siberia, were ice-free. That does not mean that they were not cold. They probably had very severe winters, but in summer the ground thawed out and raised its usual crop of plants, and herds of animals grazed and browsed and wandered where they would.

Interior Alaska was also unglaciated, and probably there was a land bridge to Asia, so that during that time there was free migration of such creatures as the great hairy mammoth and the musk-ox between the two continents. Only they could not get southward, for advance along the west coast of North America was blocked by the Cordilleran glacier front coming down to the sea.

The southward migration of the animals did not take place as a single, gradual, coordinated movement, in Prof. Matthew's opinion. Instead there were a number of separate dispersals, or waves of migration; perhaps one to each slow convulsion of the earth.

Man No Exception

The most advanced of animals, Prof. Matthew pointed out, came down out of the cold lands latest and are still found predominantly in north temperate and subtropical regions: dogs and wolves, bears and raccoons, weasels and otters, deer and horses, and cats of all degrees.

Man himself is no exception. Australia, which gives asylum to the largest remnant of the primitive first dispersal wave of animals, also has the most primitive of living human races. Other dark races, less primitive but still unadvanced, occupy the forest lands of the southern continental projections—sharing them, by the way, with man's lesser cousins, the apes and monkeys. In the North, nearest the roots of the old glaciers, the most intelligent and progressive races have built their civilizations in Europe and Asia, and have transplanted their culture to that other glacier-scoured continent, North America.

Science News Letter, October 24, 1931

The windiest spot on earth so far found by explorers is on the coast of Antarctica, at Commonwealth Bay.

In the eleven far western states, motor vehicles average about 500 miles a year of travel more than cars in the other states.

MEDICINE

Digestive Ferments Used in Treating Abdominal Adhesions

SUCCESSFUL experiments in the use of digestive ferments to treat troublesome adhesions which may form after abdominal operations were reported to the American College of Surgeons by Dr. Alton Ochsner and Dr. Earl Garside of Tulane University of Louisiana School of Medicine, New Orleans.

Drs. Ochsner and Garside studied 280 animals and found that in every animal adhesions reformed after operation to divide the pre-existing ones. They then tried introducing various solutions into the abdominal cavity after operating on

the adhesions. With a solution of the digestive ferment, papain, few or no adhesions reformed in over nine-tenths of the cases. Papain is obtained from the juice of the fruit of the papaya. Another ferment, trypsin, prevented the reformation of adhesions in nearly half the cases. The theory is that after the adhesions have been divided, the ferments act to assist in removing the excessive amounts of fibrous adhesions before the organization of the fibrous tissue into new adhesions has occurred.

Science News Letter, October 24, 1931