

ARCHAEOLOGY

Roman City in Britain Had Flatiron Building

A "FLATIRON" building, almost two thousand years older than New York's famous Flatiron, has been discovered.

Archaeologists digging in the ruins of the old Roman city of Verulam, not many miles from London, have brought to light this triangle shaped plan of a Roman temple. The building, which stood at an intersection of streets, is believed to have owed its wedge-shape to the same requirements of fitting a space that caused Broadway's Flatiron to be raised. Verulam's flatiron may prove unique among Roman temples.

Fragments of columns and other architectural remains offer some idea of the adornment of the temple. A central courtyard, opening off colonnaded corridors, contained a large altar and two statues. Cavities in the floor contained bones, chiefly of birds, and vessels used as containers of oil and other substances.

Science News Letter, November 11, 1933

GENERAL SCIENCE

Many Wisconsin Professors On Full-Time Research

WHAT may prove a new impetus in scientific research is seen in the announcement by the University of Wisconsin of a huge experiment under the terms of which 36 full-ranking professors will be relieved of all teaching duties for periods ranging from a year to a semester to devote full time to research.

It has long been the custom and practice in universities of this country to place the teaching burden upon the higher ranking members of the faculty, and, as a general rule, professors were forced to do their research in odd moments, and even more often, through assistants carrying out their orders.

This practice has been found to strengthen the teaching side of the university but it has weakened the research. Under the terms of the new experiment, the top ranking professors will be given full time to devote to investigation for a year, and then they will be returned to the teaching force while others go into research. This, it is hoped, will keep professors intimately in touch both with the scientific investigation field and with the domain of teaching,

a correlation that has sometimes been lacking in some American universities.

The experiment at the University of Wisconsin was made possible by the Wisconsin Alumni Research Foundation, a non-profit organization holding the patents on many discoveries made at the University by members of the faculty, and using the income derived from these patents to promote more research. Most famous of the patents held by the Wisconsin Alumni Research Foundation is the one on the Steenbock process, discovered by Prof. Harry Steenbock, by which the vitamin D potency of various foods and oils such as cod

liver oil have been standardized and raised by means of a process of irradiation with ultraviolet light.

The Alumni Foundation will finance the research of most of the 36 professors assigned to investigation under the terms of the experiment. The research will be in the fields of geology, soils, chemical engineering, plant pathology, anatomy, bacteriology, mathematics, mechanics, horticulture, astronomy, physiology, zoology, physics, genetics, poultry husbandry, chemistry, pharmacy, botany, history, sociology, economics, Spanish, and law.

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PHYSICS

New Low Weight for Neutron Discovered by Atom-Smashers

AMERICAN ultra-modern alchemists working at the destruction and creation of new atoms from old have found that one of science's newly discovered building blocks of matter called the neutron is much lighter than English physicists have measured.

Dr. Ernest O. Lawrence, addressing the Solvay International Institute of Physics at Brussels, told how he and his colleagues, Drs. M. Stanley Livingston and Malcolm C. Henderson of the University of California, have again used their whirligig atom-smashing machine to pry into the hearts of atoms. Accelerating the hearts of heavy hydrogen atoms which are called deuterons up to the enormous energy of 3,000,000 volts they have bombarded the rare light metal beryllium. A full report will be published in a forthcoming issue of the *Physical Review*, the American Physical Society journal.

These are the most energetic atomic particles ever produced by man and the most efficient atom-destroying bullets ever devised. These scientists scanning the results of the bombardment conclude that the beryllium disintegrates. Among the fragments flying out as a result of the explosion are neutrons. These neutrons are electrically uncharged particles similar to the hearts of ordinary hydrogen atoms called protons.

The California scientists say that the neutron weighs 1.0006 mass units. Prof. J. Chadwick of Cambridge University, England, last year said that the neutron

weighs 1.0067 mass units. This little difference in mass means an enormous difference in energy for it is from the transformation of mass into energy that modern alchemists hope to realize the Utopia of the future where all the energy necessary to run the world will come from the actual transformation of weight into driving power.

The crashing of the deuteron bullets into the target of ordinary beryllium of isotope number 9 results in a transmutation of elements. Beryllium is changed into boron of isotope number 10 and a neutron. Assuming this to be the explosion that happens, the California physicists have calculated the new low value for the weight of the neutron, 1.0006 mass units.

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S L E E P

an address by

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