

ELEMENTS CHANGE WHEN SHOT WITH ATOMIC BULLETS

How nitrogen can be changed to fluorine and then to hydrogen and oxygen when hit by the rapidly moving nucleus of an atom of helium was described to the National Academy of Sciences by Dr. William D. Harkins, of the University of Chicago, who has even succeeded in photographing the changes.

In a closed chamber containing very moist air, the moving atoms are not visible, but they have the property of condensing the water vapor along their path into a long narrow cloud, so that their path can be traced and when one atom hits another, a forked line is seen, due to the fact that they rebound. This process was invented by Prof. C. T. R. Wilson, of Cambridge University, England.

"A photograph taken by this method indicates that a fast helium nucleus strikes the nucleus of a nitrogen atom, possibly forming the nucleus of a fluorine atom," said Dr. Harkins. "This almost immediately explodes to give a fast hydrogen nucleus and the nucleus of an oxygen atom."

Efforts to convert mercury to gold were unsuccessful, Dr. Harkins said. "An X-ray tube was used to shoot electrons at 138,000 to 145,000 volts into mercury," he stated. "If any one of these electrons were to add itself to the nucleus of a mercury atom, without driving out another particle, an atom of gold would be formed. We found that if any electrons attach themselves in such a way, less than one in a billion does so, since no trace of gold was found in the mercury bombarded."

PALESTINE EXCAVATORS FIND MAGIC FLOWER POT

By E. N. Fallaize,
Secretary of the Royal Anthropological Institute, London.

An interesting discovery has just been made in one of the Canaanite Temples at Beisan in Palestine, now being excavated by the Expedition of the University of Pennsylvania Museum, which, if correctly interpreted, throws fresh light on some of the religious and magical practices of the early inhabitants of Biblical lands. In one of the two temples belonging to the reign of Amenhotep III, or Amenhotep IV, when this part of the country was under the rule of the Egyptians, has been found a hollow circular ring of clay, to the upper part of which are attached cups and animals' heads. At the base of the cups are holes connecting with the hollow part of the clay ring.

Mr. Allan Rowe, field director of the Expedition, suggests that this is a flower vase such as the classical writers mention as having been used in the temples of the great Syrian goddess whose rites were closely connected with nature and with fertility in all living things. Mr. Rowe has pointed out that a similar object was found at Megiddo some years ago and another much later in date in a temple of Aphrodite at Naukratis in Egypt, and suggests that they may actually be "The Gardens of Adonis" to which classical writers refer in connection with the religious practices of ancient Greece and the Near East.