

PHYSICS

First A-Bomb Blast

► THE CRADLE of the atomic bomb lies remote and lonesome upon the New Mexico desert.

Nine years ago, on July 16, the world's first atomic explosion fused the desert sands and fashioned a crater at a remote spot 50 miles northwest of Alamogordo.

Today this historic site is still under military control and impossible to visit without clearances and permissions. It is part of what is now called Holloman Air Development Center where guided missiles and pilotless aircraft are being developed and tested.

Barbed wire encloses the rim of the scar on the face of the earth where the first atomic bomb was detonated at the top of a 37-foot-high tower with a flash that lighted up the sky as far as 450 miles away.

One of the legends that has grown up about the bomb is that a blind girl near Albuquerque 120 miles away saw "the tremendous flash with her sightless eyes."

Dr. J. Robert Oppenheimer was head of Los Alamos Laboratory where the atomic bomb was built and developed. Instead of being barred from atomic "secrets," as now, he was creating them.

He was in command that tense dawn nine years ago when the scientists them-

selves were not quite sure that the bomb could be made to explode or, if it did, whether there might not be even larger chain reaction consequences than they expected.

The test did proceed as expected, however. The atoms fissioned explosively. The steel tower holding the bomb was completely vaporized. Sand within a radius of 400 yards was transformed into a glass-like substance, the color of green jade. For about a mile on all sides of the explosion there was not a rattlesnake or a blade of grass left.

Today the desert vegetation is restoring to wilderness this historic spot. Bits of fused glass, still somewhat hot with radioactivity, are finding their way into curio collections as symbols of the beginning of the atomic age.

Tourists cannot visit this atomic "shrine" since it is in the midst of three great test ranges of the Air Force and the Army, Holloman, White Sands and Fort Bliss.

When and if the preparations for the next war subside sufficiently, this is one of the new age spots that will undoubtedly be taken over by the National Park Service to be visited by tourists curious to see where the atom was first split in violence.

Science News Letter, July 24, 1954

PHYSIOLOGY

William Beaumont Shrine

► A CLASSIC research in medicine now has a shrine.

The Beaumont Memorial on Mackinac Island, Mich., has been dedicated to Dr. William Beaumont, who, over a century ago, conducted the first and most important experiments on digestion of food in the stomach made anywhere in the world.

The memorial is a reconstruction of the retail store of the American Fur Company, where in June, 1822, occurred the accident that resulted in the Beaumont experiments in the physiology of digestion.

A French-Canadian boy, Alexis St. Martin, was accidentally shot through the stomach. Dr. Beaumont, at that time an Army surgeon stationed at Fort Mackinac, was called to attend St. Martin.

While he cleaned the man's wound, he remarked that the patient would probably not live 36 hours. St. Martin did live. As a matter of fact, he survived Beaumont by many years.

Soon after the accident, the physician, out of charity, took St. Martin into his own home, cared for him and attended him professionally. For two years Dr. Beaumont tried unsuccessfully to get the wound in the boy's side to heal.

He then had his great inspiration and turned accident into opportunity. He started the experiment that not only brought

fame to himself and his young patient, but laid the foundations for present medical knowledge of how the human stomach functions.

For eight years, off and on, Beaumont continued his studies, actually watching the stomach at rest and at work digesting different kinds of food.

He found what causes the flow of stomach juices, how they are mixed with and digest the food. Most people eat more than they need, he learned. Some foods digest easily, but others retard the digestive processes. Three to four hours he observed to be the length of time needed to digest the average meal.

Then in 1833 he published his findings. These have since been added to, but they have never been controverted because Beaumont's book is largely a report of factual observations.

The Michigan State Medical Society which sponsored the Beaumont Memorial expects many Americans to visit Mackinac Island and the Beaumont Memorial Collections, traveling to the historic site by horse-drawn carriage.

Science News Letter, July 24, 1954

The prospective *alcoholic* frequently experiences "blackouts," or memory lapses, after moderate drinking.

Questions

ARCHAEOLOGY—What are "atlatls?" p. 52.

ENTOMOLOGY—Where do chiggers usually bite? p. 53.

PHYSIOLOGY — How may bones give a clue to diet? p. 55.

How does radiation affect the stomach's action? p. 57.

PUBLIC HEALTH—What is a "sugar baby" in Jamaica? p. 54.

VETERINARY MEDICINE — How does blue tongue disease affect sheep? p. 57.

Photographs: Cover, Museo Nacional de Antropologia; p. 51, McDonnell Aircraft Corporation; p. 53, Bell Aircraft Corporation; p. 55, Pennsylvania State University; p. 64, Milton Riback.

ZOOLOGY

Rare Baby Rodents Received at Zoo

► TWO EXCEEDINGLY rare baby rodents, known in the United States only by their scientific name, have been received at the National Zoological Park in Washington.

Although babies, they are already one foot long and, when grown, will be about two feet, Dr. William Mann, director of the Zoo, said. They have enormous incisor teeth and are a mottled brownish color.

Although they have several different common names in South America, the scientists here know them only as *Dinomys branickii*. The two babies came from Colombia, South America.

Since only two or three others of this species have ever been shown in the United States, Dr. Mann considers them to be "zoologically very important."

Science News Letter, July 24, 1954

Losses from *forest fires* were held to an all-time low in the United States in 1953.

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