

tery casings are a source of danger and must not be distributed for use as fuel. Discovery of the cause of the outbreak, which occurred within a two-week period, was made by Dr. Wilmer H. Schulze of the Baltimore City Health Department. The outbreak was reported to the health department by Drs. Miriam Brailey and H. B. Rothschild of the children's department of the Johns Hopkins Hospital and by Dr. Frank R. Smith, Jr., of the Provident Hospital.

Science News Letter, October 22, 1932

ENGINEERING

Huge Airplane Tires Used on Tractors

ROUGH-RIDING, steel-wheeled tractors are being tamed into smooth-going, comfortable mounts by super-balloon tires.

This is one of the latest applications of pneumatic tires and was described by Burgess Darrow of the Goodyear Tire and Rubber Company at the meeting of the Society of Automotive Engineers in Toronto. Mr. Darrow called it a startling development, because the full airwheel, practically the same tire developed for airplanes with the addition of a non-skid tread, is used. They are 20 inches wide and are inflated at from three to five pounds pressure.

"The demand came first from the orange groves of Florida where sand hindered the usual operation and steel tires sometimes damaged tree roots," Mr. Darrow stated. "The drawbar pull that can be exerted by the tractor with such tires is astonishing; in most cases it exceeds that with the steel tires."

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ARCHAEOLOGY

"Oldest American House" Dated by Tree Calendar

Annual Rings in Corner Post Give 784 A. D. as Date Of Cutting Timbers for Pueblo Pit House in Arizona

THE "OLDEST" houses built by the white invaders of the present United States which are historical exhibits at such places as Sante Fe, N. M., and St. Augustine, Fla., become veritably modern when compared with dwellings of the Indians who lived centuries ago in the American Southwest.

Archaeologists can now confer with some assurance the title of "oldest dated house in the United States." Like many records, the title has changed hands frequently since research made a decision possible.

Less than three years ago, this new sort of rivalry for antiquity began, when Dr. A. E. Douglass of the University of Arizona announced the completion of tree-ring research making it possible to find out the exact age of old Indian habitations in the Southwest. Since that announcement, the dating of prehistoric pueblos and cliff dwellings has gone busily on. The interest that attaches to the "oldest" dated house in this country has shifted from place to place as new dates are authenticated.

Dr. Douglass' method of making prehistoric, abandoned ruins of houses reveal their precise age is so ingenious that it has attracted wide interest. The device is a calendar formed of

the annual growth rings of trees.

The calendar's success hinges on the fact that tree rings are not alike. In 1930, for example, growing trees in many parts of the United States received very little rain. As a result, the ring added to the girth of one of those trees was conspicuously narrow and meager. Thus each calendar year sets its characteristic stamp on the wood, and a series of unusually dry or rainy years forms a pattern of tree rings which is not likely to be repeated.

Using the unusual sequences of years as guides, Dr. Douglass matched tree rings on older and older cross-sections of timber. In 1929 he had a complete tree ring calendar, with rings matched to calendar dates from 700 A. D. on.

When the calendar was complete, the ages of some forty Southwestern settlements were at once revealed. Oldest of them all was Pueblo Bonito, which contained a beam of timber cut and used in house-building in the year 919 A. D.

Pueblo Bonito's record stood unchallenged until a few months ago. Then an Indian settlement two miles away proved its priority. In this ruin known as Una Vida a beam was dated 861 A. D.

This record stood a short time, and then gave place to an Arizona record. A pueblo near Allentown, Arizona, was being excavated, and four timbers were found in the floor of a house. The wood was cut by the builders in the year 797.

Now comes a new announcement, and a new "oldest dated house in the United States." The Museum of Northern Arizona has excavated a burned Pueblo pit house, which was occupied for about a hundred years, back in the prehistoric times. The Indians who built it unwittingly established a cornerstone just as authentic as any tablet of chiseled stone. The corner posts of the house were the "official records." One of these has been examined for its date in the tree ring code, and the reading gives a new depth to United States "history"—784 A. D.

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AIRWHEELED STEEL MULE