



MUMMY-CAVE VILLAGE—This is a model showing in miniature a cliff-dwelling as built in a cavern of Canyon del Muerto, Arizona, which was occupied about 1250 A.D. The Indians abandoned the cave about 50 years later because of drought and a military defeat, archaeological evidence indicates. This diorama is in the new Hall of Indian America at the Chicago Natural History Museum. (See also page 83)

the rear. Flying speed is recovered by nosing down and diving.

In the two new devices now ready, the pilot is warned of approaching stall by the sounding of a horn and the flashing of a light, Mr. George stated. These signals are actuated in one model when the airplane reaches a certain angle and the airflow is reversed, causing the turbulent wake. This forces a vane which projects from the leading edge of the wing to move upward, closing a switch.

The other model is operated when pressure reversal sucks a diaphragm up-

ward and forces an attached metal plate against electrical contacts. It has a cut-out button which can be used during take-offs and landings.

The development work on one model was carried out in Pittsburgh by Westinghouse Electric & Manufacturing Company, together with the Carnegie Institute of Technology; the other in Troy, N. Y., by the W. & L. E. Gurley Company and Rensselaer Polytechnic Institute. Scientists of other institutions assisted.

Science News Letter, February 5, 1944

MEDICINE

Typhus Vaccine Reliable

► THE AMERICAN-MADE vaccine on which the United States and Britain are relying to protect their troops from typhus fever is at least as good as any other such vaccine, including those available to the Nazis.

This conclusion, based on a report from Germany of a "crucial experiment" by Dr. Erwin Ding, who describes himself as a storm troop leader, is drawn by the editor of the *Lancet* (Dec. 18, 1943) British medical journal.

The storm troopers must have suf-

fered heavily from typhus fever, the *Lancet* editorial also suggests. Evidence for this is seen from the figures and other details in Dr. Ding's report.

He vaccinated six groups of persons with one or another of six types of typhus fever vaccine and left two other groups unvaccinated as controls. Although his results are given only in percentages, without stating how many persons were in each group, such figures as 0.5% complications suggest a number of the order of 200 in at least one group

and show that several hundreds were involved altogether.

The vaccine used for American and British troops is made from the yolk sacs of infected developing eggs. The method was developed by an American scientist, Dr. Herald R. Cox, while on the staff of the National Institute of Health of the U. S. Public Health Service.

The difficult-to-make and costly Weigl vaccine from the intestines of infected lice; vaccines from lung suspensions from infected rabbits and dogs; and weaker preparations of egg yolk vaccine than the Cox vaccine, made in Marburg, Germany, as well as a Cox vaccine made in Germany, were those tested by the storm troop leader.

The weaker egg vaccines and a dog lung vaccine made in Rumania were less effective than the others. No deaths occurred in any vaccinated group except those receiving the Marburg vaccine. Deaths in the unvaccinated control groups ran to 20% and 33%.

The number of cases of typhus developing in the groups was unaffected by vaccination, but the severity of the disease was much less in the vaccinated.

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NUTRITION

Vegetables Prevented From Loss of Color

► DEHYDRATED vegetables and fruits are protected against loss of quality through the unwanted action of the life-agents, or enzymes, of their own cells during processing by a new method on which U.S. patent No. 2,340,170 has just been issued to John M. Baer of Chicago.

Certain plant enzymes promote oxidation. This is necessary while the plant is alive and growing, but if the enzymes continue their action after the vegetables or fruits have been peeled and sliced for dehydration they produce a dark coloration in such things as potatoes, peaches and apples, which reduces their market value. Heat destroys enzymes, so if the foods are pre-cooked before dehydration this trouble does not arise; but it is not always desirable to market the products in a cooked condition.

In Mr. Baer's process, the prepared vegetables or fruits are placed in a closed chamber and the air is rapidly pumped out, to a high degree of vacuum. Then they are quickly heated, though not to the cooking point, and the temperature maintained for only a couple of minutes. After that the temperature is reduced,