

Giant Wind Tunnel At Langley Field

Aviation

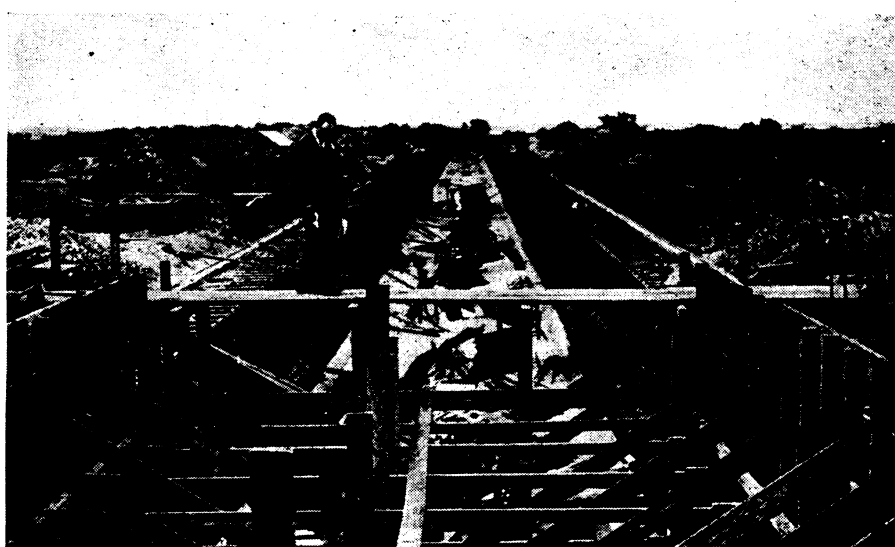
Test Basin For Seaplanes Also Being Constructed

The long seaplane testing basin under construction by the National Advisory Committee for Aeronautics at Langley Field, Va. The floor of the channel can be seen extending nearly half a mile in this photograph.

TWO new and unique research aids to better airplanes are under construction at the Langley Memorial Aeronautical Laboratory of the National Advisory Committee for Aeronautics.

One will be the largest wind tunnel in the world, in which a whole airplane can be tested. The other will be the world's largest testing basin, a covered body of water nearly half a mile long, 25 feet wide and 12 feet deep.

The governmental aeronautical research laboratory already has the largest wind tunnel in the world, the propeller research tunnel, with a testing diameter of 20 feet. In a wind tunnel a stream of air is made to flow past an airplane part or test specimen that is held stationary, and this produces exactly the same effect as though the airplane part were moving through still air. Thus the engineers can tell just what happens to an airplane in the air without the risk and inconvenience of actual flying. Precise scales and instruments attached to the airplane under test give data that make possible better design and financial savings by airplane designers. Airplane speed has been in-



creased 10 to 12 miles per hour by the N. A. C. A. cowling developed in the 20-foot tunnel.

The wind tunnel now under construction will have a rectangular mouth 30 by 60 feet. An airplane can be taken from the flying field to the wind tunnel and put under test without any change whatever. A large building covering an area 434 by 222 feet will house the new giant tunnel. Two large propellers, each 35½ feet in diameter and powered by 4,000 horsepower electric motors, will furnish the air stream that will be equivalent to the rush of an airplane through the air in actual flight.

The seaplane testing basin also under

construction is 2,060 feet long and will probably be in operation late this year. In it flying boats will be given test runs at speeds up to 60 miles an hour. Both Navy and commercial users of planes that land on water are eager to have adequate test information as to how floats and other water landing gear can best be built. At present floats and pontoons on seaplanes and amphibians are built more or less by rule of thumb because of lack of knowledge of the way they carry their loads. The testing basin is expected to furnish information that will allow better, more efficient and cheaper construction.

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Stone Age Tools In China

Archaeology

OLD Stone Age implements have been found in the eastern part of Shensi province along the upper courses of the Yellow River, proving that man existed there during the ice age, it was revealed at the annual meeting of the Geological Society of China held in Peiping recently.

The discovery was announced by Pére Teilhard de Chardin, the Jesuit priest who, with Pére Licent, found traces of a similar culture on the borders of the Ordos desert in 1923. Pére Teilhard is president of the Geological Society of France and ranks high among the world's paleontologists.

Among the specimens exhibited to the meeting were some typical paleolithic scratchers and a boulder of very hard quartzite which appeared to have been broken by heavy blows and probably was used for smashing up other pieces of stone into convenient sizes.

"Here we have proof that in pleistocene times man was living not only on the edge of small lakes in the Ordos desert but also along this part of the Yellow River," Pére Teilhard declared. "This culture is exactly the same as the one of which we found traces in 1923 and might be compared with the Mousterian culture associated with Neanderthal man in Europe."

Careful search may reveal a still more extended stone culture of that

time in the fertile valley of the Yellow River, scientists at Peiping believe. The fact that the implements were found in the base of the loess is interpreted to mean that the land surface in which these early people dwelt was shortly afterwards overwhelmed by terrific dust storms which deposited millions of tons of windblown debris from the Gobi desert.

From then on, it is thought, all signs of human culture vanished from the stage, man having been driven out and not returning till his reappearance with a fully developed polished stone culture corresponding more or less to the neolithic culture of the post-glacial time in Europe.

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