

GENERAL SCIENCE

**Noted German Scientists
Work for Uncle Sam**

► IN ADDITION to the 270 German and Austrian technical experts recently revealed to be working in this country under the War Department, more are known to be in Navy custody, but their number and the nature of their work has not been released.

Army plans call for increasing the number to approximately 1,000, in the program which got underway on an experimental basis in September, 1945. Some of these alien scientists have been granted the right to apply for immigration visas and may eventually become American citizens.

Included among the "big name" scientists revealed to be in this country are Dr. Alexander W. Lippisch, former chief designer of the Messerschmidt Aircraft Co.; Wernher von Braun, credited with inventing the V-2 rocket; Dr. Friedrich Doblhoff, Vienna, designer of the world's first jet-propelled helicopter; and Dr. Helmuth Heinrich, formerly of the Graf Zeppelin Research Institute. German rocket experts are working at Fort Bliss, Tex., and nearby White Sands, N. Mex., where U. S. Army Ordnance is firing V-2's to gather scientific data. Another group of the Germans is stationed at Wright Field, Ohio, where the Army Air Forces have a large research and development center.

Many of the scientists brought publications and notes which may prove important contributions to American science and industry, the Army said.

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ZOOLOGY

**Oscar Made His Fortune;
Estate Finally Killed Him**

► OSCAR, pet seal of the California Academy of Sciences, used to dive for pennies. Having no pockets in his seal-skin coat, he swallowed them. That was where he made his fatal mistake.

One morning he was found dead on the floor of his pool. Autopsy disclosed that he had nearly four pounds of coins in his stomach, mostly pennies. These included a good many of the wartime "white pennies" which contained zinc, suspected of being poisonous.

Cash value of Oscar's "estate" was \$7.54. It was donated to the San Francisco Children's Hospital.

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WORKING FOR U. S.—A German scientist, Dr. Helmuth Heinrich, demonstrates an unconventional type parachute in the vertical wind tunnel at Wright Field, Ohio. U. S. Army Air Forces photo.

PHYSIOLOGY

Growth Fluid Synthesized

Chick embryo tissue cultures live in first solutions of known chemical composition. Research may lead to knowledge of tissue differences.

► FRAGMENTS of embryo chick heart tissue have been kept alive and pulsing for as much as six weeks in a solution of exactly known chemical composition, Dr. Philip R. White of the Institute for Cancer Research, Philadelphia, announced in a lecture before the New York Academy of Sciences. Other embryo tissues have been maintained in growing condition for somewhat longer periods.

This represents the first step towards growing animal tissues indefinitely under fully known and controllable conditions, something that has already been accomplished on plant tissues by Dr. White and several other workers.

The "immortal" chick heart cultures, with which the name of the late Dr. Alexis Carrel has been popularly associated, were grown in fluids taken from animal bodies. Since the makeup of these fluids is very imperfectly known, important details of the biochemistry of

growth must also remain unknown.

It is the determination of Dr. White and his co-workers to duplicate with animal tissues the success they have already had in plant tissues, thereby opening the road toward better knowledge of all growth processes, including the malignant ones that produce cancers.

The nutrient solution used in Dr. White's laboratories contains dextrose, several mineral salts, 11 vitamins and 12 amino acids. He stated candidly that "this is a shotgun mixture which will have to be studied in more detail, which can probably be simplified, and may ultimately need to be enlarged."

One of the things that should be possible, once a really successful animal tissue culture fluid has been developed, capable of sustaining life and growth indefinitely, is a study of the basic biochemical differences between normal and cancerous tissue.

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