

AERONAUTICS

Atomic Energy for Power

➤ **NOBODY** should expect to see an atomic-powered rocket taking off for the moon this year or next, the Society of Automotive Engineers was told in Dayton, O., by Andrew Kalitinsky of the Fairchild Engine and Airplane Corporation. But atomic energy as a source of power for aircraft promises achievements unobtainable with standard fuels.

We have not manufactured an atomic power plant for aircraft, he said. The practical development of atomic energy as a source of power calls for active cooperation of both scientists and engineers, in research institutions and industry, if an early application of this power is to be made. Mr. Kalitinsky is chief engineer of the Fairchild project at Oak Ridge, Tenn.

Atomic aircraft will have to be designed to operate at very high speeds to take full advantage of the special characteristics of atomic power, he stated. It certainly will have to be a large airplane. It will have to be designed for an extremely high landing weight because practically no fuel will be consumed during flight. The crew will

have to be placed as far as possible from the nuclear reactor to protect them from harmful radiation.

There are definite limitations on the possible performance of chemically fueled aircraft, since the required gross weight of the plane increases with both range and speed. For a given speed, the required gross weight increases rapidly with the range as the amount of fuel required increases. Therefore, he explained, if we try to design an airplane of greater range at this given speed, we can not do it no matter how large a plane we select.

Because of this limitation on the speed-range performance of chemically fueled planes, we must find a new fuel. Atomic power appears to be an extremely attractive solution if we are to extend range beyond the radius of current or projected aircraft carrying standard fuels. Our present supersonic airplanes run out of fuel in a matter of a few minutes. With atomic power, they could keep going because the fuel supply would remain nearly constant.

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WILDLIFE

Lizards for Snake Feed

➤ **STATEN ISLAND** in New York harbor has lizards, and they seem to like their new home in a borough of the nation's largest city.

Only trouble thus far, reports the scientist who brought lizards to Staten Island, is that they are in areas of the island infested with poison ivy.

C. F. Kauffeld of the Staten Island Zoo tells the story of the new inhabitants of the island in the scientific journal, *COPEIA* (Dec. 31). The zoo needed lizards to feed to its snakes. No lizards were to be found on Staten Island.

To remedy this defect in lizard distribution, northern fence lizards from southern New Jersey were released in the Rossville section on Staten Island's south shore in the spring and early summer of 1942. Some 28 of the lizards were turned loose on the island altogether.

The northern fence lizard, found in many parts of the country, is a grayish brown little lizard with a body about three inches long and a slightly longer tail. It will eat "any insect or spider it can catch and master," one authority has observed.

The war prevented Mr. Kauffeld from checking up on the lizards until 1945. He found several of them then and has since found more of them.

Difficulty in making more checks on the lizard colony has been "the outrageous prevalence of poison ivy," complains Mr. Kauf-

feld. If the lizards do not "spread more rapidly of their own accord," he says that he will put them in less treacherous areas of the island.

Since the lizards were marked when originally released, the Staten Island experience may help scientists learn more about the life span of these animals, their Staten Island sponsor suggests.

Formal name of Staten Island's newest form of wildlife is *Sceloporus u. hyacinthinus Green*.

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ENGINEERING

French Machine Lays Prefabricated Track Parts

➤ "WORKING on the railroad" almost automatically conjures up pictures of big gangs of men doing things the hard way—setting and tamping ties, spiking rails, bolting their ends together. But when you are confronted with the dilemma of a vast deal of railroad rebuilding and a shortage of manpower, prefabrication and mechanized assembly seems the solution.

That is what is undertaken in the track-laying system devised by a French engineer, A. L. C. Blondelle of Sartrouville, to whom U. S. patent 2,458,050 has been granted. His track-layer consists essentially of a low-clearance Gantry crane mounted on a special car. Factory-as-

sembled sections of track, complete with rails and ties, are fed up to it from a car behind; the crane moves the track, a section at a time, out in front, and after it has been set in place by a ground crew moves out on it to repeat the process.

Rights in the patent are assigned to the Societe Entreprises Metropolitaines et Coloniales, S. A.

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PUBLIC HEALTH

'Flu Strikes All the Way From Holland to Turkey

➤ **INFLUENZA** has been striking Europeans all the way from southern Holland to Turkey, World Health Organization influenza watch stations abroad have cabled the Influenza Information Center at the National Institutes of Health in Bethesda, Md.

Scandinavia, Spain, Hungary, the American zone of Germany and the United Kingdom seem so far to have been spared.

The disease is mild but the number of cases is large. In France half the cases are due to type A virus. Type B virus has been isolated from cases in Italy but authorities are not sure it is "the main culprit."

At the Pasteur Institute in Paris and the National Institute for Medical Research in London scientists are trying to identify the responsible viruses. Hope of stopping epidemics by vaccines depends on knowing the virus strains causing the epidemics.

If new influenza virus strains are discovered they will be sent airmail from London or Paris to Dr. Thomas P. Magill at National Influenza Strain Study Center in New York for identification.

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CHEMISTRY

Prevent Potato-Sprouting With Relative of 2,4-D

➤ **POTATOES** in storage can be prevented from sprouting, and thus spoiling their marketability, by treatment with a chemical relative of 2,4-D that might appropriately be nicknamed 2,4,5-T. Usefulness of this chemical was discovered in experiments by Prof. Ora Smith, J. H. Ellison and Fred McGoldrick of Cornell University.

Spelled out in full, the name of the compound is 2,4,5-trichlorophenoxyacetic acid. Other growth-control chemicals have been used in the past to check sprouting in potatoes, but 2,4,5-T has been found superior to those formerly used, the three researchers indicate in *SCIENCE* (Jan. 21).

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Portland cement, capable of hardening under water, takes its name from the British Isle of Portland because the British citizen who developed it thought it resembled the color of natural stone quarried on that island.