# SCIENCE NEWS

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## NEW AND IMPROVED AIRFIELDS

THE chance that your city or town will have its own new or improved airfield looks promising if Congress passes the billion-dollar master airport plan just submitted to it by the Civil Aeronautics Administration. The plan asks that Congress appropriate $100,000,000 a year for the program over a period of five to ten years, which if carried out would result in a maximum of 6,000 new or improved flying fields for the nation, designed to accommodate everything from the small private "flying jeep" to long-range giants of the sky.

The plan follows a precedent established by the Public Roads Program which has operated satisfactorily for many years on a 50–50 basis, the Federal Government supplying 50% of the funds needed to build the airport and state or local authorities supplying the remaining money.

In preparing the report, the CAA took into consideration population, trade, mail, airline traffic, applications already made for new airline routes, as well as other economic and geographic factors. The proposal calls for greater numbers of new airports for metropolitan areas, but at the same time recommends that facilities be set up for such sections of the country as Nevada, where vast spaces make the airplane a logical form of transportation.

The report points out that by investing $25,000,000,000 in public roads during the past 25 years the United States has become a nation on wheels, with 32,000,000 motor vehicles in operation in normal times. Using the same reasoning, the CAA believes that by sponsoring airport development, the nation will take to the air.

After the war, the report states, there will be approximately 350,000 Army and Navy flyers and 150,000 civilian pilots and students. Also interested in aviation will be 2,500,000 others who have been trained during wartime in aviation skills in the armed forces and almost an equal number employed in aircraft factories. It adds to these 250,000 students who are taking aeronautics courses in the high schools each year, and there is a total number of 6,000,000 prospective flyers. If the CAA is correct in its predictions, over nine million people will be actively interested in flying after the war.

The report points out the biggest drawback to the development of private flying is that the small airplane has little or no utility value for the average flyer. You cannot use your private plane as you do your automobile. The CAA hopes to increase the utility value of small planes by locating airports near the homes of potential flyers as well as close to their places of business, and near recreational areas, national parks, and other places to which they might want to fly. The majority of small airports to-day are located where the low cost of land and development was the primary consideration, rather than convenience to the users of the airport.

## ITEMS

THE severe earthquake reported on December 7 had its epicenter somewhere in a wide region extending from southern Japan to the Jap-owned Bonin Islands. This preliminary determination was made by seismologists of the U. S. Coast and Geodetic Survey, on the basis of half-a-dozen reports wired through Science Service from observatories on this continent. The shock began shortly after midnight by U. S. reckoning: at 12:35 A.M., Eastern War Time. Instrumental magnitude was given as 8, which indicates an earthquake of the most severe type.

PROMPT recovery, thanks to penicillin, of three women suffering with anthrax is reported by Dr. Franklin D. Murphy, Dr. Alfred C. La Boccetta and Dr. John S. Lockwood, of the University of Pennsylvania, in the *Journal* of the American Medical Association. These are believed to be the first human patients with anthrax treated with penicillin. Successful use of the mold chemical in mice infected with anthrax was announced in October of this year by Dr. F. R. Heilman and Dr. W. E. Herrell, of the Mayo Clinic. The women treated by the Philadelphia doctors were wool workers. They suffered from an uncomplicated cutaneous form of the disease. Each had a painful sore on her skin which at first looked like a pimple but rapidly got larger, inflamed and discharging. Penicillin cleared up the skin condition rapidly and the women were well within nine or ten days. Larger doses, it is thought, would be equally effective in more severe skin infections and in cases in which the anthrax germ attacks internal organs.

THE pessimistic rule that whenever man discovers or establishes a new plant crop, some insect pest discovers it, too, has found no exception in the case of guayule, the rubber-producing shrub native to the desert of the Southwest and adjacent parts of Mexico which the war emergency has brought into serious, large-scale cultivation. A hitherto unrecognized species of aphid has been found infesting the roots of slightly wilted guayule seedlings at the U. S. government nurseries at Salinas, Calif. After a careful examination confirmed the fact that it is really a new addition to the army of known pests, Professor E. O. Essig, of the University of California, has given it the scientific name *Cerosipha californica*. It will be known by the common name of guayule aphid.

A SPECIAL coil spring, and a shock absorber, is the basis of a new suspension-type tractor seat which will take all the jolts out of riding the farm tractor over rough plowed land and ease the work of the driver. It may perhaps decrease the high degree of kidney and skeletal disorders among farmers blamed on the all-day-long tractor jarring. The new tractor seat was developed by the Monroe Auto Equipment Company, of Chicago, which developed and has made thousands of seats for war tanks. The coil spring is placed directly under the driver's seat, and the triple-action hydraulic shock absorber at the rear. The absorber is similar to those commonly used in automobiles. Together the two devices give stability that enables the rider to stay level while the tractor bobs over rough ground. The construction of the new device is simple and inexpensive.