AERONAUTICS

Noise Complaints Reduced

➤ LOW-FLYING light airplanes equipped with noise reducers greatly cut complaints from home-owners near neighborhood airstrips, it has been shown by recent tests in the Boston metropolitan area.

The number of complaints from households near the flying fields is the basis of the conclusion. Most complaints were by telephone but complainants were later interviewed.

Ten landing strips in the region were used in the tests. Two light airplanes modified by reduction gears, four-bladed propellers and engine exhaust silencers were flown in comparison with two standard planes.

Few complaints were received of disturbing noise from the modified planes, although many neighbors got a scare because they feared the quiet planes were in trouble and making forced landings.

This noise-reducing experiment, sponsored by the National Advisory Committee for Aeronautics and carried out by Aeronautical Research Foundation of Boston, was part of an extended program of experimentation with external noise reduction on light airplanes. It was designed especially to determine neighborhood reactions. A report of the work, prepared by Fred S. Elwell of the foundation, is available from the NACA in Washington.

The noise-reduction devices used on the planes were those found by extensive investigations to be effective. Airplane noises are due largely to whirling propellers and engine exhausts. The first are decreased by using four relatively short propeller blades instead of two long blades. This decreases blade-tip speed, and the resulting noise. Engine exhaust noises are reduced by mufflers somewhat similar to those used on automobiles.

Federal officials are of the opinion that the elimination of the nuisance noise of light airplanes will encourage more private flying. Neighborhood landing strips will probably become more common if the noise factor is removed. Communities now object to their establishment but would withdraw objections if the noise nuisance is eliminated.

Science News Letter, July 12, 1952

METEOROLOGY

Jet Weather Forecasts

➤ QUICKER AND better weather predictions and quicker and better information about weather above 30,000 feet were urged for safety in flying in a jet age.

Jerome Lederer, director of the Guggenheim Safety Center at Cornell University, Ithaca, N. Y., who gave the only invited paper at the three-day meeting of the American Meteorological Society, Buffalo, N. Y., said this was necessary because of the much greater speed and the much higher altitude of jet planes in flight.

He urged weather men to specialize as do physicians. Specialists in wind speeds, icing conditions, turbulence, rain and snow and the jet stream might make forecasts more accurate. He quoted Col. A. F. Merewether, American Airlines weather man, who pointed out the benefits to physicians of specialization, and added that they have a better chance of hiding their mistakes.

The jet pilot needs a much clearer picture of wind and other conditions at altitudes above 30,000 feet than he is getting today, Mr. Lederer declared. Because of the speeds at which he travels, he needs quicker reports of weather conditions at airports so that he will have time to plan an alternative landing place, if necessary.

Visibility at airports, he said, must be reported more from the standpoint of the pilot who has to make use of the reports. Conditions which make it hard to distinguish the runways from adjacent areas, especially water, must be made known to the pilot.

Finally, communicating the reports from the weather man to the pilot must be speeded up.

Science News Letter, July 12, 1952

INVENTION

Bullet-Proof Cloth "Gas" Tank Invented

➤ A BULLET-PROOF, self-sealing gasoline tank made of silk, wool or other cloth has recently received a patent.

The gasoline tank, for use in military aircraft where weight is a big factor, is made of several layers of the cloth, glued together on the bias. Inside the cloth is a self-sealing liner, made of a material which will swell upon contact with gasoline. The swelling seals the bullet holes.

Great advantage of the cloth, according to the inventors, is that, unlike aluminum or other soft metals, a bullet will not leave jagged holes. Nor will the pressure created inside the tank by the passage of the bullet cause strains or joints or rivets. The cloth layers are overlapped and the successive layers are cut on the bias at various angles for greater strength. An adhesive, not soluble in gas, is used to bind the layers together.

The inventors are Arthur M. Howald, Perrysburg, and Leonard S. Meyer, Newark, Ohio, who assigned their patent, number 2,601,525, to Libbey-Owens-Ford Glass Company of Toledo.

Science News Letter, July 12, 1952

DENDROLOGY

Rot Fungus Threatens California's Native Palm

➤ A MYSTERIOUS fungus disease that rots the trunks is threatening California's only native palm, *Washingtonia Filifera.*

Named after George Washington, these thick-trunked trees with the broad, fan-like leaves are to be found both in native stands and domestic plantings throughout the West.

Dr. Ellis F. Darley, assistant plant pathologist of the University of California's Citrus Experiment Station, has found that more than 20 trees have recently succumbed to the trunk-rotting disease. The trunk rot has not been found yet in native stands of the palms, but has done costly damage to domestic plantings of the trees in the same area.

The fungus which causes the rot apparently enters the palm trunks through wounds or cracks. The disease seems to be associated with heavy watering, where sprinklers throw streams of water on the trunks of the trees.

Dr. Darley said the fungus associated with the disease is similar to that which causes the brown rot gummosis disease in citrus trees, which has been found in the Coachella Valley. The fungus has been found in every one of the palm trees killed by the rot and also in the soil around it.

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