



DEVELOPED PELLETS MADE OF SOIL—Dr. Lytle S. Adams of Tucson, Ariz., has improved this system of scattering grass seed from the air by using pellets containing seeds, fungicide, insect and rodent repellents, fertilizer and moisture.

meat in your butcher's shop—if grass could be seeded.

Scattering grass seed from the air is called "ordinary broadcasting." The seed is simply dropped. Some of it "catches on" and becomes grass. Much of it does not. Yet this simple method has proved "more than reasonably successful" on more than half a million acres of potential grazing land in experiments directed by Department of Interior scientists.

A method of getting more even seeding with fewer seeds has been developed by a retired dental surgeon in Arizona, Dr. Lytle S. Adams. He uses pellets made of soil. Inside the pellet are seeds,

fungicide, insect and rodent repellents, fertilizer and moisture.

The Department of Interior has spent \$300,000 in the past three years experimenting with Dr. Adams' pellets for aerial seeding. Approximately 146,000 acres have been sown.

Making the pellets and dropping them so that grass will grow have proven difficult problems. First seedings on Indian lands in Arizona were followed by a severe drought. Selection of the proper soil to use in the pellets has been a problem. In some cases seeds began to sprout before they were dropped from the plane.

But the stake in this and other attempts to seed range lands of the West quickly and cheaply is great. Millions of acres of now-idle land might produce millions of pounds of beef for a hungry world. This land must be seeded quickly at the right time and more cheaply than it can be done on the ground.

Air raids which brought death and destruction in the war are now bringing life in seeds for lumber and food.

Science News Letter, May 8, 1948

With a new camera recently patented, snapshots can be taken either in black-and-white or in color simply by turning a knob.

ENGINEERING-AERONAUTICS

Periscopic Sextant Aids Finding Plane's Position

► PERISCOPES on airliners, similar to those used on submarines, make it possible for navigators to determine their positions by sextant readings on celestial bodies without the customary viewing bubble projecting above the surface of the plane.

The so-called periscopic sextant, already installed on the Clipper Paul Jones, now flying between New York and Calcutta, has proved satisfactory in a dozen trips across the Atlantic, Pan American World Airways revealed.

The periscopic sextant combines in one delicate instrument the periscope and the bubble sextant. Attached to the ceiling of the flight compartment, it permits the navigator to scan the heavens without the necessity of climbing into an astrodome or viewing bubble. His view of the stars is obtained through a small tube which pokes up a few inches through the metal skin of the plane, and which is so arranged that it can be rotated to give a complete picture.

Another advantage of the periscopic sextant is the lessening of drag on the plane by the elimination of the projecting astrodome. The instrument was developed by the Kollsman Instrument Co., Elmhurst, N. Y., originally for Pan American's version of the Boeing Strato-cruisers, which are now on order.

Science News Letter, May 8, 1948

The unique part of the Mathematics Magazine among mathematical publications is to make expository articles on modern research available to readers who are not specializing in these fields.

In the March-April issue, there appears an expository paper on "The Meaning of Elementary Algebra". This paper presupposes only the fundamental operations of arithmetic. Similar expository papers on the meanings of various classic subjects in mathematics will follow, presupposing, at most, the previous papers of this group.

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