Planes Make Pastures

Aviation

Airplanes are making the desert blossom, if not exactly as the rose, at least as first-class pasture land, in large areas of cutover timber land in the Pacific Northwest. They have added to their already long list of accomplishments the role of broadcast sowers of grass seed, and the first experiments have shown them to be much more successful and rapid than hand workers, as well as more economical.

Timber companies in the Northwest have found the problem of the large areas of stripped lands on their hands left after logging operations a serious one. The most economical use appears to be to burn the "slash" and then sow them in grass and use them as sheep or cattle pasture. But the land is for the most part very broken and rough, and men on foot have a hard time seeding it. This method proved to be so slow and expensive that it has been employed only where conditions were ideal.

One corporation hired a plane and pilot from a commercial flying company. It had a special hopper built for releasing the grass seed, which was spread out in a wide stream by the propeller blast. Flying fairly low across the newly burned-over land, the plane sowed the grass seed into the loose ashes, which served as a receptive and well fertilized seed bed.

One plane was able to sow from 150 to 200 acres of rough land a day. The best that a man on foot can do over similar terrain is five to eight acres a day. Even counting the high cost of plane hire or ownership, the flying method of sowing is by far the cheaper, averaging 40 to 60 cents an acre, as against a cost for hand sowing of 75 cents to $1.25 per acre. Moreover, plane sowing requires only six or eight pounds of seed per acre, while the hand method uses ten or twelve. Since grass seed costs from 30 to 35 cents a pound wholesale, this item is not inconsiderable.

The work of sowing over broken ground is not without its dangers. The planes have to fly fairly close to the ground, and the broken surface and frequent deep side ravines cause all sorts of treacherous air currents. The aviator has to be constantly on the alert, for a forced landing would almost certainly mean a crash. However, all the work to date has been accomplished without accident.

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Fire Enemy of Oil Production

Engineering

Many of the devices used in modern warfare are now employed in American oil fields to fight that deadliest of enemies, fires. Earthworks are thrown up, trenches dug, barricades erected, sappers put to work tunneling, airplane propellers used to divert the intense heat from the workers and gas masks and protective clothing quickly brought into use. It is expensive, but less costly than to let thousands of barrels of oil and millions of cubic feet of gas burn to waste and endanger surrounding property.

Every precaution is taken to prevent oil field fires. Smoking is prohibited; flame is kept from the vicinity of the wells; but there is an ever-present danger of fire from static electricity caused by the friction of steel tools and cables, from lightning, carelessness and from other sources. Ordinary fire preventing and fighting methods are not sufficient. Water has no effect on burning oil and gas, especially when the flames rise high in the air like a gigantic blow torch and radiate heat so intense that a camera lens cracks even when photographers endeavor to take a picture of the spectacle from vantage ground a hundred or more feet away.

Two gushers which were ignited in the Santa Fe Springs oil field, one of the most prolific in the world, burned with such heat that more than a week passed before men garbed in asbestos and constantly sprinkled with water could clear the ground within working distance of the flames. More than a month went by before the flow of oil and gas could be shut off and the blaze thus starved.

The flames quickly melted to wreckage the steel derricks above them and burned to charcoal nearby wood structures. (*Turn to next page*)

Greeks Wore Silk

Archæology

Were the clinging sculptored draperies of the Parthenon Fates made of silk? Were the diaphanous and alluring feminine garments described in Aristophanes' comedies of the same sheer silkiness that arouses diatribes from the pulpits of today? Though silk is not supposed to have been known to the Greeks until the fifth century A. D., Gisela M. A. Richter, of the Metropolitan Museum of Art, is inclined to think that the much-suppressed females of classic Greece knew silk and its beautifying advantages and transparencies long before.

Linen and wool were the common fabrics worn on that luminous peninsula but classical literature contains many references to thin, highly expensive garments called Amorgian tunics, Miss Richter declared recently in a report to the Archæological Institute of America. They are thought to have been made of especially fine linen from the island of Amorgos, a rocky bit of land in the Aegean with, however, only a few tiny valleys fertile enough for the cultivation of flax; hardly enough, according to Miss Richter, to support an important industry of even a high priced article.

Supporting her theory by research among ancient Greek and Latin writers she has established an hypothesis that the (*Turn to next page*)

Hearing Helps in Maze

Phychology

Soundproof material used on the floor of a maze has revealed to investigators, after many years of experiments, a secret by which rats successfully learned the only correct route through the long series of complicated passages of a maze to the single exit.

Dr. John F. Shepard, professor of psychology at the University of Michigan, read a paper before the Michigan Academy of Science, Arts and Letters, stating that rats which had previously learned the maze perfectly seemed utterly lost when the sound of their pattering feet on the floor of the maze was stilled by soundproof layers.

Lengthy experiments indicated that the rats were not finding their way out of the maze by their senses of sight, smell, muscular feeling, or touch. Finally, it was discovered that changing the position of the squares of asphaltic linoleum which covered the floor of the maze caused the animals to be less certain of the direction to take in finding their way. Soundproof floors were installed, and these prevented the rats from learning the route.

Experiments now in progress will determine whether the rats depend solely on their sense of hearing for guiding themselves out of a maze. Since rats are widely used by psychologists in studying such processes (*Turn to next page*)

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