

Shaken Reed Shows Path Through Clouds

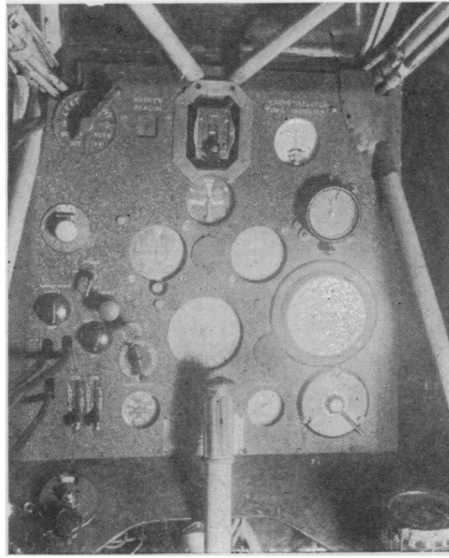
Aviation

New Radio Beacon Reaches Eye Instead of Ear

TWO vibrating white reeds on the instrument boards of New York-Cleveland mail planes will soon paint an air path visible in fog, rain and snow, over 250 miles of the worst flying terrain in the United States, it is announced by Clarence M. Young, assistant secretary of commerce for aeronautics.

This visual radio range beacon to be installed during the next few weeks will supplement the aural type radio range beacon that has been in use at Bellefonte, Pa., in the Appalachian mountains, for more than 18 months, and if it proves satisfactory will probably replace the aural beacon and be extended to other parts of the country. Its installation is necessitating expensive changes in transmitting equipment and the addition of a reed box to the planes. The apparatus is a joint development of the U. S. Bureau of Standards and the aeronautics branch of the Department of Commerce.

The aviator tells whether he is on the right path by watching two white reeds vibrate. If the reed on the left vibrates most, he has veered off to the



What the flyer must watch. Instrument board for airplane showing radio-impelled reeds placed at the top.

left of his course. If the amplitude of the right-hand reed is greatest, the plane is too far to the right. When both vibrate alike the plane is on its true course.

The aural beacon system now in use gives the same information by coded signals picked up in the head phones. Great concentration is required of the pilot and he must wear the phones practically all the time.

Neither beacon system makes unnecessary the searchlights which are installed at 10-mile intervals. When the weather is open the lights can be followed, but when the aviator must go for miles through fog, rain or snow which completely hides the ground and lights, he has to rely on the beacon to keep him on his course. A recent test flight from Detroit to Washington through bad visibility was made almost entirely by beacon signals and not by maps.

The path of the beacon will bring the pilot close enough to the landing field for him to see the ground lights and make a descent by sight. No effort is to be made at the present time to put in practice "blind" landing as accomplished by Lieut. James H. Doolittle for the Guggenheim Fund.

Science News-Letter, May 24, 1930

Wanted: Moths

ANY moth-eaten fur coats, or woolen dresses, today? This strange inquiry comes, not from an old-clothes dealer, but from Cornell University.

In its quest for a practical method of controlling clothes moths the Department of Entomology, at the University's experiment station, has found it impossible to breed enough of the pests to keep up with the investigation. In a single test the experimenters attempt to kill off fifty each of the moths, eggs, larvae, and pupae. And the experiments have to be made repeatedly. Hence the appeal to the public to donate articles which moths are now using as dinner rations, or as a headquarters.

Prize gifts received include a toy lamb, a child's feather bed, and a set of furs, all supporting large colonies of the pests. One fine rug—fine from a scientific point of view—had more than 200 larvae, and a fur coat almost as many, the moth investigators stated.

Entomology

Science News-Letter, May 24, 1930

Are You Intelligent Enough to Drive?

Psychology

"THE best safety device is located above the neck—about four inches above the neck."

With this quotation from a sapient friend, Dr. Walter V. Bingham, industrial psychologist of the Personnel Research Federation of New York City, keyed his radio talk on Psychology and Highway Safety, given over the Columbia Broadcasting System under the auspices of Science Service.

Engineers, he said, have done much toward making driving safer, both in designing better and stronger vital parts for cars and in adapting new highways to the new traffic conditions. But mechanical factors after all cause only a minority of accidents. The old joke about smashups being caused by "the nut that holds the steering wheel" still remains grimly true. To remedy the weaknesses and defects in this complex mechanism is the task of the modern psychologist.

Some psychological defects that result in accidents, Dr. Bingham said, are inherent in the unfortunate drivers

and cannot be remedied. Such, for example is color-blindness, which makes about one-twelfth of all men unable to be sure whether the traffic light shows red or green. Such also are slowness of wit, in judging what the other fellow is going to do next; or slowness in reflex action, preventing one from doing the right thing quickly enough even when he knows what should be done.

If such defects are so serious as to amount to real incompetence, the driver in question should never be allowed a license. Frequently, however, they are not of so grave a nature, or the driver knows of them or even unconsciously compensates for them without knowing about them.

Proper tests, Dr. Bingham said, will help to bring out weaknesses that might result in trouble and will help the person concerned to seek proper remedies if they are available, or will enable the community to protect itself against the hopeless case who is practically sure to get into jams.

Psychology

Science News-Letter, May 24, 1930