

RADIO WEATHER ROOM

Through these portholes engineers of the General Electric Company can check the performance of aircraft radio transmitting sets under all varieties of man-made weather. Wind, rain, sleet, snow, Arctic and tropic temperatures, six-mile altitudes and power dives can all be tested in the new laboratories. The rooms are of steel and have walls 18 inches thick. The temperature can be changed from 40 below zero to 160 degrees above zero. The air pressure can be lowered to four pounds to the square inch, comparable with an airplane altitude of 30,000 feet.

METEOROLOGY

Mt. Washington Observatory Celebrates Five Years' Work

WINTER and summer for the past five years, a weather observatory upon the top of Mt. Washington, the East's most "arctic" spot, has spied upon the elements for the benefit of forecasting and meteorological research. In celebration of the successful completion of this venture, the Mt. Washington Observatory has been incorporated as a non-profit scientific organization.

The Mt. Washington Observatory is functioning jointly as an (off-) airways station of the U. S. Weather Bureau, reporting the weather by radio or telephone every six hours, day and night, and as a meteorological research station of the Blue Hill Observatory of Harvard University at Milton, Mass.

Its regular observations are much used by the Weather Bureau and airlines, for in low overcast weather, Mt. Washing-

ton alone in the Northeast stands forth and proclaims the weather a mile overhead. Blue Hill Observatory also follows the reports, which it relays to the Weather Bureau after receiving them by ultra-high-frequency radio direct from Mt. Washington, and uses them in its forecasting especially in winter. The frequent radio contacts are also used for the transmission of news for skiers and others and for making reservations for friends' week-ends in the mountains. Also Pinkham Notch is kept informed of the weather up top, whereby hikers or skiers need not go unprepared.

Numerous meteorological studies are in progress—mostly at Blue Hill from data gathered on Mt. Washington. Here are sample results:

Ultra-violet radiation, the kind that burns or tans, is 40 per cent. stronger

on Mt. Washington than on Blue Hill.

Floating balloons have revealed large eddies dangerous to unwary fliers in the lee of the mountain.

The Mt. Washington region had the heaviest rainfall of any place during the widespread floods of March 1936, because the mountains forced the greatest ascent of the humid sub-tropical air from which the rain fell.

The windshields placed around the precipitation gages on the summit nearly doubled their catch, which indicates that the rainfall is much greater than formerly supposed.

Science News Letter, August 28, 1937

BOTANY-RADIO

Botanist-Priest in Arctic To Broadcast by Shortwave

AMERICA'S amateur radio operators looking for a new thrill can talk with Père Arthème Dutilly, Canadian scientist-priest who is now exploring the Arctic on a one-man botanical expedition. (See SNL, July 17).

Word received at Catholic University from Père Dutilly says that he now has a new transmitter and receiver for use on radio shortwave length. In his tiny boat, built in Holland, Père Dutilly expected to pass the coast of Labrador about July 20 and be near Chidley on Aug. 1. Between that date and Aug. 15 he expected to enter the straits leading to Hudson's Bay and arrive at Churchill on August 15.

His itinerary will take him northward to Cape Eskimo, Chesterfield Inlet, Baker Lake, Southampton, Repulse Bay and Igloolik. He will return to Quebec about Oct. 1.

If you own a shortwave receiver you can hear Père Dutilly four times each day, "working" the radio waves under the call letters CYNT. His broadcasting will begin after his arrival at Churchill. Daily broadcasts will be made on 23 meters at 11 a.m., on 36 meters at 5 p.m., on 87.72 meters at 10 p.m., and on 160 meters at 10.30 p.m.; all times Eastern Standard. Père Dutilly speaks both French and English.

Special Broadcasts

Special broadcasts on Saturday and Sunday will be held on the following wave lengths at the times stated: Saturday, 2 p.m., 23 meters CYNT; 2.30 p.m. on the amateur band at 20 meters under call letters VE2KI; 5 p.m., on 36 meters CYNT and 11 p.m., also on 36 meters, with all times again Eastern Standard.

On Sundays, Père Dutilly will trans-

mit at 9 a.m. on ten meters under the call letters VE2KI; at 2 p.m. on 20 meters with same call letters, and a repeat of this transmission again at 3 p.m.

Science News Letter, August 21, 1937

MEDICINE

"Aviator's Ear" Described In Medical Journal

AERO-OTITIS MEDIA—you may have suffered from the condition without knowing what to call it. If you stay on the ground, you'll never have it. Only airplane pilots and passengers are affected.

Capt. Harry G. Armstrong of the U. S. Army Medical Corps and J. W. Heim of the Physiologic Research Laboratory, U. S. Army Air Corps, describe the effects of flight upon the middle ear. (*Journal, American Medical Association, Aug. 7*).

They have christened these ill-effects, once known only as "aviator's ear," as "Aero-otitis media," and term both the acute and chronic conditions a new clinical entity.

The difficulty is caused by the pressure difference between the air in the tympanic cavity and that of the surrounding atmosphere. It occurs during changes of altitude in flying. Its manifestations are inflammation, discomfort and pain in the ear, ringing and deafness. Sometimes in severe cases it affects the facial nerve and its branches, causing a neuralgic-like pain.

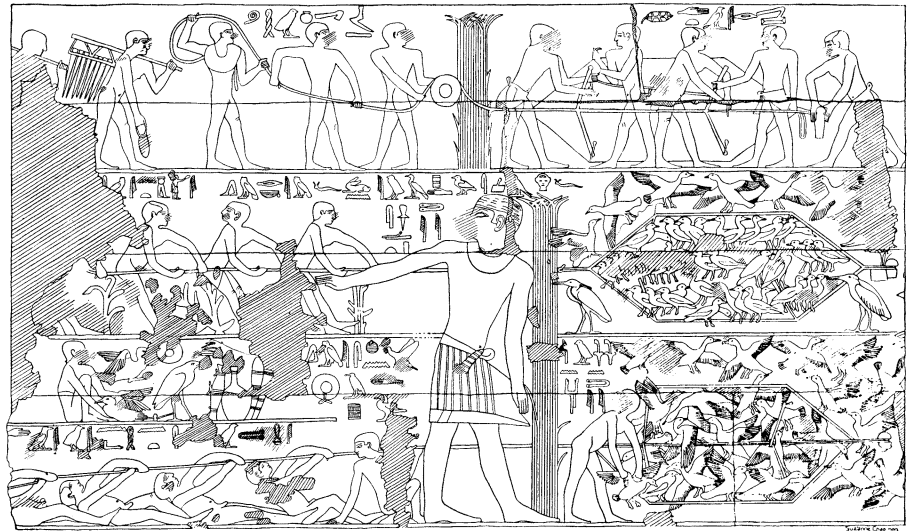
The harmful effects of flight on the middle ear are due to the peculiar structure and functioning of the eustachian tube, Dr. Armstrong and Mr. Heim assert.

If a passenger is inexperienced or ill or asleep or has a bad cold, he may easily experience this difficulty. Trained pilots usually try to avoid flying when they have bad colds because of the discomfort and pain in the ears that almost invariably follow.

The simplest maneuver to ventilate the tympanum and prevent the trouble is to swallow. Yawning, singing, shouting, auto-inflation and contracting the salpingopharyngeal muscles also help.

The last named defies description, these specialists in aviation medicine declare. It can be learned only by stifling a pretended yawn, at which time a roaring in the ears will indicate that the effort is successful.

Science News Letter, August 28, 1937



EGYPTIAN BIRD-TRAPPING SCENE

From the tomb of Ti at Sakkara about 2800 B. C.

ARCHAEOLOGY

Modern Prints Help to Clear Mysteries of Ancient Egypt

Odd System of Bird Netting Found Duplicated on Italian Print; Ancient Game Played by Modern Arabs

TWO baffling points depicted in carvings on Egyptian tombs of the Fifth Dynasty, dating from about 2900 B. C., have been cleared up by a relatively "modern" print from 15th century Italy and by a truly modern photograph in an American magazine.

Experts of the Egyptian department of the Boston Museum of Fine Arts have used these sources to explain the construction of bird traps used by the ancient Egyptians of about 5,000 years ago and to explain a peculiar type of jumping game.

Dows Dunham, associate curator of Egyptian Art, recently went over to the print department of the museum to attend an exhibit of their outstanding works. There he saw a 15th century bird-trapping scene which was strikingly similar to scenes occurring on certain Egyptian tombs of the Fifth Dynasty.

Both bird traps were an intricate system of nets and ropes and stakes so arranged that they came up and overlapped the bird. They moved in a manner like that of old-fashioned outside

cellar doors in rural American homes.

Using the Italian print and the Egyptian tomb carving, Mr. Dunham has now reconstructed a working model of the Egyptian device which in some respects was superior to and more ingenious than the Italian bird trap used thousands of years later.

The modern clue which helped solve the puzzle of high jumping games of Egyptian children came from a recent issue of the National Geographic Society's magazine in which a scene was shown of modern Arab children jumping. Miss Elizabeth Eaton, assistant in the department of Egyptian Art, noted the similarity between the Arab youngsters hurdling their companions and ancient scenes of children playing—scenes dating from Egypt in the Fifth Dynasty.

Characteristic of the youngsters being jumped, was the position of their feet and hands to form the hurdle. Two children sat on the ground facing each other and placed their feet one above the other. Then they placed their hands one above the other atop their feet and