

## RADIO

# FM Facsimile Transmission

➤ FM radio broadcasting stations now bringing static-free "voice" programs into homes may be easily adapted also to bring printed pages by facsimile transmission, the American Institute of Electrical Engineers was told by John V. L. Hogan, Hogan Laboratories, New York, N. Y.

The cost of adding a multiplex facsimile channel to an FM (Frequency-Modulation) sound station is relatively small, he stated. The multiplex makes it possible to operate two simultaneous services without mutual interference.

Facsimile transmission is a method of delivering a printed page, map, illustration or other matter from station to receiver by air or wire. The transmitted signals are much like those sent in television but in the receiver they cause a permanent record by the use of photographically sensitive paper or by an electric stylus on a special paper.

"Facsimile is just beginning to go into general use," Mr. Hogan said. "More or less like television, the broadcasting of facsimile will first be directed to receiving sets and display recorders located in public places, such as hotel lobbies, airport terminals and theater lobbies.

"As regular programs become available on a broadcast basis it is expected that home receiving sets with facsimile recorder, or facsimile recorders for attachment to standard FM sound receivers, will get into production. The inevitable consequence of quantity manufacture is to bring down cost, and thus facsimile receivers are expected to become available at such reasonable prices that they can be purchased and used by the average home owner."

This means that the publication and delivery of a newspaper to the public by radio should become an accomplished fact.

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ical had been added to the list to consider.

The new chemical, an organic phosphorous compound called EPN, is intended principally for use against mites. Mites are tiny pests that do millions of dollars worth of damage each year to the country's fruit trees. EPN is very short for ethyl p-nitrophenyl thionobenzenephosphonate.

The Food and Drug Administration tolerance hearings received an unexpected two-and-a-half week recess because the Department of Agriculture, the lead-off witness, completed testimony 15 days ahead of schedule. Sessions were resumed Monday, Feb. 13.

EPN has been undergoing extensive tests, but has not been available to the general public. The Du Pont Company, makers of the compound, have just announced that they expect it to be available for spring spraying by March 1.

The U.S. Department of Agriculture has not completed its own tests of the new mite-killer. For that reason EPN is not yet included on the Department's list of recommended insecticides.

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## MEDICINE

# How To Survive Arctic Cold

➤ A WAY to keep alive longer under cold conditions, with potential importance in the event of an Arctic war, has been discovered by a team of Army and civilian researchers at Fort Knox, Ky., and New York City.

Doses of thyroid extract would be the method, these researchers show.

Survival time was increased 54% by the proper dosage of a thyroid compound, called endothylin, given to a group of experimental animals. Not only were the animals able to survive the cold longer, but more of them survived.

When the activity of the thyroid gland was suppressed by doses of another chem-

ical, thiouracil, more animals died and died sooner on exposure to the cold.

The thyroid dosage had to be carefully regulated, to avoid causing thyrotoxicosis, a dangerous condition of poisoning from too much thyroid material in the body. A dose that raised the basal metabolic rate by 30% to 50% was found correct for the animals.

Chief practical drawback to the use of thyroid for men potentially threatened with prolonged exposure to cold is a time lag. When the thyroid extract doses were given by mouth it took four or five days to produce the cold-resisting effect. Men able to survive that long would probably survive without the aid of the medicine. Given by injection, the thyroid compound took effect within eight hours, but in a military situation medicine that can be given by mouth is preferred.

The studies, revealed in the first issue of the new U.S. Armed Forces Medical Journal in Washington, D.C. were carried out partly by Dr. Curt Lange of New York and by researchers under the direction of Col. Fred Knoblock at Fort Knox, under the auspices of the Army Medical Research and Development Board.

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## MINING

## Dr. F. G. Cottrell, Biography in Preparation

➤ THE biography of the late Dr. Frederick Gardener Cottrell, founder of the Research Corporation, New York, former director of the United States Bureau of Mines and the Fixed Nitrogen Research Laboratory is being compiled by Frank T. Cameron, 240 Glen Drive, Sausalito, Calif. who would appreciate letters, informal anecdotes, personal impressions or information regarding any phases of Dr. Cottrell's scientific work.

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## ENGINEERING

## Car Life Expectancy Doubled in 25 Years

➤ THE family car of today has a probable life of 12 years of service. It will have 103,000 miles behind it before it reaches the junk yard.

These auto life expectancy figures have been compiled by W. L. Aiken, automotive engineer at SKF Industries, Philadelphia, Pa.

In 1925 the average auto had an average life span of about six years and 25,750 miles. The car of 1935 had a life expectancy of over eight years and a probable 58,000 miles.

Cars last longer now because:

Metals are lighter, stronger and more durable, due to alloys.

Engines are better balanced because the sizes and weights of parts within assemblies are precision matched.

Wear is substantially reduced by anti-friction bearings that keep moving parts in better alignment."

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## ENTOMOLOGY

## New Spray for Fruit Tree Mite Available Next Month

➤ WHEN the government resumed hearings Feb. 13 on the quantities of poisonous insecticides that may remain on fruit and vegetables at marketing, one more chem-