

TECHNOLOGY

Radiophone Fights Snow

► LONG DISTANCE telephone operators will be able to blow horns of unattended snowplows and leave light messages for snowplow and highway maintenance truck drivers this winter with institution of two-way radiophone service for almost all winter highway maintenance equipment in the province of Ontario.

Two-way radio telephone service is being installed on 108 snowplows and a larger number of maintenance trucks this winter by the Ontario Department of Highways to speed up clearance of over 10,000 miles of road during heavy snowstorms.

Since snowplow and truck drivers of maintenance trucks sometimes operate alone, it will be possible under the new system to summon them to their vehicle when they are not in the cab of the car. When a driver does not answer the summons of a long distance telephone operator at once, she can automatically start the horn in the cab of the snowplow or truck to get his attention.

If the driver is too far away from his vehicle to hear the horn and does not come to answer the radiophone, then the operator automatically switches on a light in the cab, which tells the driver to call the long distance operator when he gets back to the cab.

The radio telephone service has been used experimentally with winter highway maintenance equipment in Ontario the past few years in the area about Toronto. It is being expanded this year to cover most of southern and eastern Ontario, and will be further expanded in 1953.

The radio telephone will help speed up the massing of snow cleaning equipment during and after a heavy snowstorm, and will allow massing of sanding trucks on road sections where there is glare ice. It will help move equipment quickly from one division to another. It will also provide emergency communication to summon doctors and ambulances to accidents.

Science News Letter, December 13, 1952

INVENTION

Sharper TV Pictures

► DR. ERNEST O. LAWRENCE, Nobel prize winner, has received a patent on an invention which promises to produce sharper television pictures.

Dr. Lawrence is director of the radiation laboratory at the University of California, Berkeley.

In his patent, number 2,619,612, Dr. Lawrence says that the present scanning method in television receivers tends to blur the line between light and dark areas in a picture. Dr. Lawrence would modify the deflection of the scanning beam in the direction in which the lines are scanned in proportion to the rate of change of illumination from point to point along the picture line. The deflection of the scanning beam would increase when the illumination is increasing and decrease when the illumination is decreasing.

With this method, Dr. Lawrence says, substantially full theoretical resolution of a television receiver may be sensibly obtained, and blurring of the edges of television images is reduced to a negligible minimum.

The patent is assigned to Chromatic Television Laboratories, Inc., San Francisco, Calif., to which Dr. Lawrence had previously assigned his method of color television.

Science News Letter, December 13, 1952

ANIMAL NUTRITION

Hogs Fed Terramycin Gain on Low Protein

► FARMERS MAY be feeding more protein to their hogs than is necessary. Experiments with terramycin, one of the Big Five so-called mold remedies, suggest this. The studies are reported by Prof. J. A. Hoefer, Prof. R. W. Luecke, F. Thorp, Jr., and R. L. Johnston of Michigan Agricultural Experiment Station, East Lansing.

Pigs on both high and low protein feeds gained at the same rate when both had been given terramycin.

A third of an ounce of terramycin to each ton of both high and low protein feeds produced fat pigs of substantially the same weight in 105 days. Pigs on the same diet except the terramycin ration took up to three weeks longer to reach slightly lower weights than the terramycin-fed pigs had reached.

Science News Letter, December 13, 1952

• RADIO

Saturday, Dec. 20, 1952, 3:15-3:30 p.m., EST

"Adventures in Science" with Watson Davis, director of Science Service, over the CBS Radio Network. Check your local CBS station.

The Christmas tree will be discussed by the guest, A. M. Sowder, extension forester of the U. S. Department of Agriculture.

PLANT PATHOLOGY

Find Citrus Disease In Florida Orchards

► A VIRUS disease of citrus fruits that causes great damage in South America has become established in Florida orchards, reports the U. S. Department of Agriculture.

The virus disease, called tristeza, was identified from several Florida locations for the first time this year. Although the disease has caused great losses of citrus trees in South America, particularly Brazil, the Department does not expect tristeza seriously to impair Florida citrus production.

Tristeza has been known in California since 1940, under the name of "quick decline," the Agriculture Department said, but its rate of spread has been slow. The species of plant lice, aphids, that spreads the disease so fast in South America is absent in this country, acting as an automatic check.

Tristeza is a Spanish word meaning "sadness," an apt description of the disease. There are no clear-cut symptoms—the trees just seem to lose vigor, become unproductive and die.

Science News Letter, December 13, 1952

Questions

ANTHROPOLOGY—When was the Christmas tree first accepted as a necessary part of Christmas? p. 378.

• • •

ASTRONOMY—What are the best means for determining the weight of the universe? p. 375.

• • •

ENTOMOLOGY—What foreign pest has recently gained a foothold in North America? p. 376.

• • •

MEDICINE—How can heart trouble be disguised? p. 379.

• • •

OPHTHALMOLOGY—What causes snow blindness? p. 381.

• • •

PEDIATRICS—What four kinds of toys help all-round development of children? p. 372.

• • •

PUBLIC SAFETY—How can you figure the safe distance to the car ahead quickly? p. 373.

• • •

Photographs: Cover, Freeport Sulphur Co.; p. 371, Luria Engineering Co.; p. 373, Bell Telephone Laboratories; p. 375, U. S. Navy; p. 378, U. S. Forest Service; p. 384, Anacortes Veneer, Inc.

A new source-book
of science fun

Science Magic

By KENNETH SWEZEY
author of *After Dinner Science*

More than 125 scientific tricks, stunts and demonstrations all easy to perform with simple, every-day equipment. With 226 how-to-do-it illustrations.

\$3.75 at all bookstores

McGRAW-HILL BOOK CO.
330 West 42nd St., New York 36