

gain. There may be no improvement in areas which need it most.

Meanwhile, with "a marked increase in dollars available to many countries . . .," said FAO, "the demand for food and agricultural products will tend to run ahead

of supply . . . It is clear that prices will continue to rise."

When she gets to market, the world's housewife will find it costs more to feed her family.

Science News Letter, November 4, 1950

# RADIO

## No Worry on Color TV

► THE APPROXIMATELY 7,000,000 present owners of television sets have no cause to worry over the recent decision of the Federal Communications Commission to permit the Columbia Broadcasting System to put its color system on the air commercially. Present broadcasting will continue.

When CBS starts broadcasting in color, present sets, as they are, will not be able to pick up the picture either in color or in black-and-white. But practically all present broadcasting in black-and-white will continue and people will continue to receive and enjoy the programs.

Many will probably never want the color pictures, judging from the history of the motion picture industry. Technicolor was developed years ago but the great majority of all feature pictures are still produced in black and white because of the increased cost of technicolor and the lack of sufficient public demand for motion pictures in color.

For those who would want to enjoy the pictures in color which CBS will put on the air, new receivers will be available. Old receivers can be converted, experts explain, but the cost may be around \$100. Old receivers can be converted to pick up pictures in black-and-white from the transmissions in color at probably half this cost. Much work remains to be done before low-cost satisfactory adapters are developed. The new color receivers will be more costly than present receivers, perhaps by \$100 because they are more complicated.

The CBS system is based on revolving color-filter disks. Such disks are necessary in the receivers as well as in the cameras.

Motors to run them are needed. The size of the direct-view picture tube is limited by the size of the spinning color disk that can be used in the home. However, magnifying lenses can be used if desired.

Electronic systems of color television, in contrast to this CBS mechanical system, transmit pictures in color that can be picked up in black-and-white on any television receiver. Because they are transmitted on standards that do not conflict with existing standards for black-and-white they are called compatible. Adapters are needed to receive the CBS pictures on present receivers because they are non-compatible. Considerable work must be done before any of the all-electronic systems reach the highest degree of perfection.

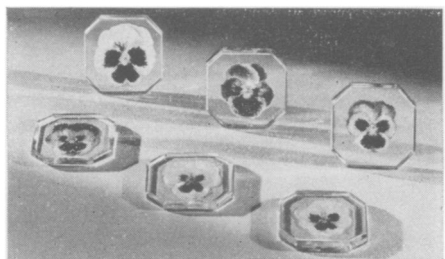
Science News Letter, November 4, 1950

# ENGINEERING

## Alarms and Recorders Detect Carbon Monoxide

► CARBON monoxide detecting instruments have evolved from unreliable canaries and mice through simple colorimetric devices to practical, continuously operating alarms, indicators and recorders, according to N. W. Hartz of Pittsburgh, Pa.

This expert of the Mine Safety Appliances Company, Pittsburgh, described new gas detecting instruments in Oklahoma City to the American Institute of Electrical Engineers. The carbon monoxide devices are activated by cells of Hopcalite, a catalyst that speeds up the change of carbon monoxide into carbon dioxide. The process causes a temperature rise. This is measured by a thermopile that sends electrical energy to alarms and recorders.



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The demand for detectors of air pollution has led to the development of instruments to show danger that may come from undesirable gases from industrial plants and other sources. He described instruments to detect poisonous and flammable gases.

Present combustible gas detecting instruments have been simplified to the point where they are composed essentially of an electrical Wheatstone bridge in which a sample is drawn over a heated catalytic filament so that any combustibles present are burned upon contact with the hot wire.

Raising the temperature of the filament, Mr. Hartz stated, increases its electrical resistance in proportion to the percentage of the lower explosive limit concentration. Portable instruments of this type are powered by flashlight dry cells.

At the same meeting W. E. Belcher, Jr., of the Minneapolis Honeywell Instrument Company, described a device that detects unsafe temperatures in rotating machines, particularly in bearings. This new instrument is now about to emerge from the laboratory, he said.

Many applications for this type of instrument were listed by Mr. Belcher.

Science News Letter, November 4, 1950

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