

## ELECTRONICS

# New Television Receiver

A new television receiver which will pick up the color broadcasting of all proposed systems has been revealed. It also reduces flicker problems.

► A NEW color television receiver, just revealed, will be able to pick up pictures, in either color or in black-and-white, of any of the color broadcasting systems now proposed. It will be able, also, to receive the present black-and-white broadcasting programs.

Details of this new receiver have been presented at the present hearings of the Federal Communications Commission in Washington, D. C. The commission is trying among other matters to determine if color broadcasting has reached a sufficiently developed stage to warrant the issuing of broadcasting licenses.

This new color receiver was developed by Dr. C. Willard Geer of the University of Southern California, Los Angeles. It can be manufactured to retail at a price approximately the same as present black-and-white television receivers. Also, it is not a bulky piece of apparatus, making it quite suitable for use in the ordinary home.

In addition, the color device of this receiver can be used as a color adapter to be placed on present black-and-white receivers as an auxiliary unit, or inside the set as a replacement at modest cost with a sufficient simplicity so that renovation can be accomplished by a competent television serviceman.

The color television tube which Dr. Geer has developed provides a receiving set which is all-electronic, direct-viewing, with no filters, no moving parts, no projection lenses, and no external apparatus requirements. For large screen or theater television it would lend itself to any projection system. Because it is direct-viewing and all-electronic, and utilizes no filters, its available amount of light is maximum and flicker problems are reduced to a minimum.

The simplest conception of how the tube operates may be obtained, Dr. Geer states, by likening it to the present three-color photographic process, in that three separate pictures (the green, the red, the blue) are painted upon the screen of the tube by three electron guns either all at the same time or in extremely rapid succession. With the light shining through, they are superimposed upon one another and give the effect of a complete natural color scene.

Two types of tubes were designed by Dr. Geer, the second of which is preferable. It has three electron guns placed upon the back of the tube at angles approximately 45 degrees each way from the perpendicular to the screen. The screen itself is made up of tiny pyramids which rise above the surface of the screen and in a concave

manner go below the plane of the screen. All the surfaces of these pyramids facing toward one particular gun are phosphored with a particular primary color, and paint a complete picture in that color.

These pictures will all be painted at the same time, or in rapid sequence, producing a complete tri-color picture. On the same screen, merely by turning a switch so that all guns will receive the same signal, black-and-white may be received. The red gun will paint the black-and-white signal in red, the green in green, and the blue in blue. But these will add up to a black-and-white picture.

Science News Letter, October 22, 1949

## CONSERVATION

## Larger Lobsters Should Be Thrown Back

► "THROW it back, it's too big." This cry, reversing the usual watchword among fishermen, may soon be raised by Bermuda lobstermen, as a result of a preliminary study just completed.

The study shows that the larger lobsters have a much greater reproductive capacity than the smaller. A 15-inch female lays 2,500,000 eggs at a time, against a fourth that many for a 10-incher. Under present controls, all lobsters over four inches in body length may be taken. This results in a high percentage of captures of the prolific larger females.

Dr. E. P. Creaser, biologist at Hofstra College in Hempstead, N. Y., has just returned from the first year of a three-year study of the living habits of lobsters. He points out that before new legal limits are set, forbidding the taking of large lobsters, further investigation will be necessary. Dr. Creaser also recommends the construction of rock islands as experimental lobster shelters.

Science News Letter, October 22, 1949

## PSYCHOLOGY

## "One and Only," "Lucky In Love" Are Myths

► THE "One and Only Love" is a myth.

So declares Dr. Claude C. Bowman, sociologist of Temple University.

Another romantic myth, he says, is that a person is either lucky or unlucky in love.

The tendency of men and women to think of themselves as passive "pawns" control-

led by mysterious forces called "luck," is due, Dr. Bowman believes, to prevailing ignorance of the processes of "falling in love."

It will probably be several decades before such knowledge is available, he predicts. The biological findings of Alfred Kinsey and his associates are only a beginning, he indicates.

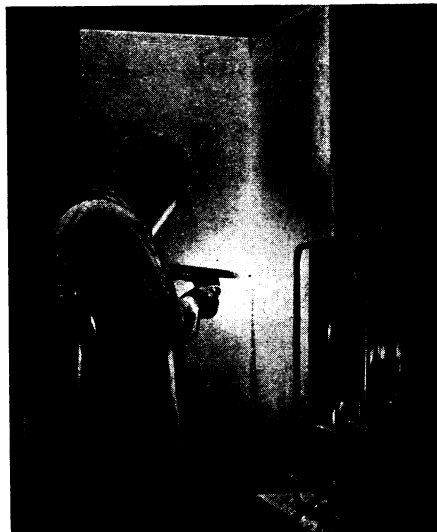
But the studies of sex relations already available, although meager, tend to explode the romantic illusion that there is a single "soul mate" to whom one is attracted by a cosmic affinity that is powerful and not to be denied.

"It seems clear," reports Dr. Bowman to the AMERICAN SOCIOLOGICAL REVIEW (Oct.), "that heterosexual affections do not necessarily run in single channels. Often there are multiple attachments and a marital choice is made with the greatest difficulty. . . . Even after marriage, though the union is supported by legal and moral sanctions, the monogamous attachment may be weakened by extra-marital attractions."

But people go on thinking that in these unhappy cases, the men and women have not been fortunate enough to find their real "soul mate" and divorce courts are filled with people hoping for "better luck" next time in finding the ideal mate.

Actually, he says, among both sexes there must be a significant proportion who chafe under the necessity of concentrating all heterosexual interest upon a single person.

Science News Letter, October 22, 1949



**NEW WELDING GUN**—Welding aluminum plate is made easy with this gun which has no rods to change, and the worker "lays his bead" without interruption. The filler metal is fed to the gun automatically from the spool at the right. This process will increase the use of aluminum plate in industrial fabrication.