



**ASSEMBLING BY COLOR PHOTOGRAPHY**—Assemblers work directly from color transparencies, a replica of the finished product which serves as an excellent visual aid, in the Ektacolor process, introduced by Bell Aircraft Corporation for manufacture of complex electronic components.

## TECHNOLOGY

## Color Pictures Replace Hard-to-Read Blueprints

► COLOR PICTURES are replacing blueprints on Bell Aircraft Corporation's assembly lines in Buffalo, N. Y., where complex electronic gear is made.

The color pictures show the innards of the equipment being manufactured. An untrained workman can glance at the picture and see immediately where to solder yellow wires, or how to bend blue wires, or where a pack of wires should be tied together.

The pictures eliminate long study of hard-to-read blueprints, which the workman often supplements with a trip to an actual working model.

Bell engineers believe the pictures will "substantially reduce" the reams of blueprints needed for the manufacture of a new piece of equipment. The meaning of the various wires is also said to become clearer to the workman so that he begins to understand what each wire's function is.

The color pictures are shot on a color film that produces a color "negative" instead of the familiar positive transparency. Any number of positive prints can be made from this negative. Each assembler can view his own copy of the picture.

Science News Letter, July 24, 1954

## ENTOMOLOGY

## Repelling Chiggers

► REPELLENTS AND insecticides can rid you or your whole yard of chiggers and other biting pests.

For the individual, repellents containing dimethyl phthalate, indalone or ethyl hexanediol are nearly 100% effective when applied properly. Dimethyl phthalate and indalone are available at chemical firms for mixing by the user.

Ethyl hexanediol is used in various commercial products. It is available at most drug stores in liquid form under the name "6-12." A body spray, "Repel-A-Mist," and a stick, "Skeeto-Go," also contain the chemical.

For most effective protection against chiggers, these products should be applied to skin or clothing around sock tops, trouser cuffs and waist, and shirt sleeves and neck.

Spread on exposed skin, the three chemicals afford protection from flying insects such as mosquitoes, biting flies, gnats and some types of ticks.

In an open area, toxaphene or chlordane applied as an emulsion spray will provide good control for one to two months. These chemicals are sold at hardware and garden stores under a variety of commercial names.

Do not use these insecticides near fruit or vegetable gardens. Children and pets must be kept from the area until the spray dries.

Before the Second World War, there was little protection from chiggers. Sulfur dusts

and ointments were messy and only partially effective.

However, when the fighting began in the Pacific and U. S. troops were attacked by chiggers carrying mite typhus, the Army allotted funds for chigger study to the U. S. Agriculture Department's laboratory in Orlando, Fla.

The Orlando scientists hired young boys to test various chemicals for effectiveness in repelling the tiny insect foe.

The boys, each with clothing treated with a different chemical, placed themselves in areas where chiggers were numerous. The fewer bites on a boy, the more effective the repellent was judged.

Within two hours, the boys often collected 200 bites. They suffered no more than a few days' itching, however. Unlike the insects' Pacific brothers and their cousins, the ticks, chiggers in the United States carry no diseases.

Many of the modern repellents and insecticides on today's market are the results of these boys' itching for science.

The chigger, often called jigger or red-bug, is found in areas throughout the country, but most thickly in southern, central and Midwestern states.

When a larva, the chigger needs blood to mature. It attaches itself to a human or other mammal. On a human, it crawls until tight clothing restricts its movement and then bores into the skin.

## MEDICINE

## Identical Twins Have Identical Disease

► A CASE of identical twin housewives who had the same disease only a few months apart, although for part of the time they were separated by 3,000 miles, is reported in the *Journal of the American Medical Association* (July 10) by two Cleveland Clinic physicians, Drs. Francis J. Rogers and Earl W. Netherton.

The disease was sarcoidosis, a chronic infectious disease affecting the eyes and face.

Medical literature showed two other sets of identical twins who had similar disorders. Such cases of identical diseases in identical twins are particularly interesting because such twins are so similar in hereditary makeup that they can be expected to react to any given stress in a manner more similar than two unrelated persons or even ordinary brothers or sisters.

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Since the parasite is no bigger than a pin-point, its victim does not know of the attack until itching begins. Then red bites are visible, clustered in rings around belt-line and sock tops.

The bites cause a severe itching that lasts several days. Calamine lotion, baking soda and water, and ammonia may help relieve the itching somewhat.

The only real "cure" for chigger bites, however, is not to get bitten.

Science News Letter, July 24, 1954