

heating elements can also have built-in lights, thus producing attractive heating and illuminating effects. Tempered glass doors, either clear or opaque, may lead from one room to another and cover cabinets and closets.

Won't the home-owner be nearly blinded by the glare from this glittering glass interior? Dr. Silverman answered with a definite "no." By the recently developed treatment of sheet glass to produce thin etched films only about a molecule thick, almost all reflected light glare can be eliminated.

Although glass plates can be used for both interior and exterior construction, glass brick and hollow tile are likely to have increased use also.

"The blocks will be produced in various colors," Dr. Silverman predicted,

"opaque, translucent, transparent."

Artistic design will evolve from the more utilitarian approach now used in modern factory construction.

Glass wool will be much more widely used for insulation. It is constantly being made lighter and is now available in a form weighing only a half-pound per cubic foot. A four-inch layer of glass wool has the heat insulating value of a fourteen-foot concrete wall, it is claimed.

"In the temporary housing provided for our Armed Forces in the Arctic regions, porous glass materials, especially wool, are employed to keep out the intense cold," Dr. Silverman pointed out.

Glass fabrics will also find increasing use in motor generators, in cables, and as battery insulators.

Science News Letter, May 1, 1943

PHYSIOLOGY—ENTOMOLOGY

Quick Change Explained

Speed of color shifts in chameleon or eel is determined by skin's pigment-containing cells, not by nerve impulses or gland secretions.

➤ WHEN a chameleon flashes from brown to green in a few seconds, or an eel more sluggishly takes several hours to shift from dark to pallid in skin hue, don't seek the cause for this difference in rates in the nerves of the one animal or the gland secretions of the other, Prof. G. H. Parker, Harvard University zoologist, told the American Philosophical Society at its meeting in Philadelphia.

Quickness of color change in some animals, slowness in others is determined primarily by the skin's pigment-containing cells themselves, he declared. This is contrary to the zoological doctrine most widely held at present, which states that the quick-changing animals do the trick by means of nerve impulses, while the ones that alter their colors slowly depend on hormones or gland secretions.

This opinion, Dr. Parker said, was based on the examination of only a few animals, and falls down when a score or more species, a wide range of color-changing speeds, are examined. As a matter of fact, the quick-changing chameleon depends on hormones, the slow-changing eel on nerves.

Slowness of response by color cells to either hormone or nerve stimulus has an analogy in a similar slowness in mus-

cle cells, Prof. Parker pointed out; a snail's muscles simply cannot move otherwise than very deliberately, while a flea's muscles always contract with a lightning-like snap.

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Time Changes With Age

➤ THE CLASSIC joke, that married people live longer—or maybe it just seems that way, has a real scientific basis. Biologically speaking, time depends on the physiological and psychological state of the organism concerned, rather than on ruler-like measurements around the rim of a clock, Pierre Leconte du Nouÿ, of the University of Paris, told the meeting. Even a relatively simple biological process, like the formation of a scar or wound, goes faster in a young person or animal than in an old one; and there is a definite mathematical formula for expressing the rate of change as age advances.

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Clover Pest Hurts Potato

➤ HOW AN insect pest that normally infests one crop, clover, becomes a carrier of a serious virus disease to another

crop, potatoes, on which it ordinarily does not feed, was related by Dr. L. M. Black of the Rockefeller Institute for Medical Research at Princeton, N. J.

Dr. Black summed up the situation:

"The potato yellow-dwarf disease sometimes causes serious losses to potato growers in the northeastern states of the Union. Potato yellow-dwarf is caused by a virus which is introduced into the plant by an insect. None of the common insects on potatoes are able to infect them with the virus, but an insect very common in clover fields and pastures transmits the virus efficiently.

"This insect is the clover leafhopper, which under certain conditions occurs in potato fields in large numbers. It plays an important part in the life history of the virus because, once the leafhopper picks up the virus, it retains it for a long time and is able to infect many plants.

"Suppose that a clover leafhopper feeds on a diseased ox-eye daisy, the common reservoir of the virus. The insect will be unable to infect any plants for the following week, but after that it may infect plants as long as it lives. It may even keep virus in its body through the winter and infect plants the next spring."

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STEEL FOR WAR—Shoveling dolomite into the furnace at a United States Steel Corporation plant preparatory to charging scrap for another heat of high-grade alloy steel. With each charge, 70 tons of alloy steel are produced.