

By listening to the electrical signals picked up from individual retinal cells of cats and other animals, a scientist found that the visual cells respond differentially to different colors.

When an observer is lying on one side, the lower eye is more sensitive to red, the upper one to blue, it was reported.

Perceptual behavior was extensively investigated as an important key to the understanding of human personality.

Appointed leaders tend to behave more democratically than emergent leaders in problem-solving situations, it was observed.

It was proposed that Menticide, or political intervention in the individual human mind to force confessions or impose an ideology, should be declared an international crime.

Decision-making conferences were found to be most productive when they showed most adequate communication (in terms of audibility, understandability and freedom to participate) and were most orderly in their treatment of topics.

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PATENTS

Top Patents Include Electroluminescent Phosphor

Numbers following items refer to U. S. Patents. Printed copies of patents can be obtained from the U. S. Patent Office at 25 cents each. Order by number, do not send stamps, and address orders to the Commissioner of Patents, Washington 25, D. C.

Notable and interesting inventions patented during the year include:

Electroluminescent lamp in which voltage is applied direct to a phosphor. Patent 2,566,349.

Cheaper germanium crystals for germanium electrical rectifiers and amplifiers using a less pure germanium as a starting material. Patent 2,565,338.

Radio equipment, truck-mounted, for determining all radio programs being received by home instruments in a neighborhood. Patent 2,552,585.

Semiconductive metal, usable in rectifiers, made largely of silicon but with additives of boron or aluminum, and phosphorus, arsenic or antimony. Patent 2,567,970.

Methylene bromide and another brominated hydrocarbon as the basis of fire extinguisher for burning gasoline. Patent 2,569,979.

Aluminum wire containing a small amount of boron to give strength and better electrical conductivity. Patent 2,545,866.

Chemical treatment process by which sea water can be made suitable for irrigation purposes but not for household uses. Patent 2,546,071.

Sonic proximity fuze to cause bombs dropped from airplanes to explode at the proper distance from the earth to cause most damage. Patent 2,536,327.

Coal-burning gas-turbine electric locomotive which uses finely pulverized coal as a fuel. Patent 2,533,866.

Electronic systems that make it possible to use powerline alternating electric current to operate direct-current motors. Patents 2,530,949 and 2,530,993.

Method used in modern artificial rain-making of forming crystals of ice in a supercooled cloud by the use of dry ice pellets dropped from an airplane through the cloud. Patent 2,570,867.

Paint for highway lines containing tiny beads of glass and titanium dioxide pigment. Patent 2,574,971.

GENERAL SCIENCE

Top 1951 Science Stories

► THE TOP ten important advances in science and technology during 1951 as picked by Watson Davis, director of SCIENCE SERVICE, are:

1. Use of atomic bombs in artillery and guided missiles, and the beginning of operation of a breeder reactor for making fissionable material out of thorium.

2. Cancer advances that include control by removing both adrenal glands and use of aureomycin to treat a precancerous stage.

3. Use of a new pain-killing drug (Dromoran) that promises to free us eventually from reliance upon morphine from imported opium.

4. Discovery of anti-atomic radiation substance, pressed juice from embryonic mice,

that restores damaged blood formation in bones.

5. Evidence that space between the stars is filled sparsely with hydrogen gas.

6. Development of new method of light production from glowing surfaces, called electroluminescence.

7. Production in quantity of first U. S. guided missile weapon, the Matador.

8. Discovery of modern type human skeleton in Old Stone Age cave in Iran.

9. Methods of synthesis of cortisone from vegetable raw materials, promising larger and cheaper production of this drug.

10. Use of antibiotics and vitamin B-12 in promoting growth of poultry and pigs.

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GENETICS

Baby Mice Are Born to Unrelated Foster Mothers

► BABY MICE have been raised from the early egg stage in foster mothers without the necessity of performing a radical operation to implant the fertilized eggs into the reproductive tract of the mouse.

Success in this technique, which will be of use in breeding and other experiments, is announced by Dr. R. A. Beatty of the Institute of Animal Genetics, Edinburgh, in a communication to the British journal, NATURE (Dec. 8).

The process is called inoovulation, analogously with artificial insemination, now widely practiced in research and practical animal breeding. Fertilized eggs are taken from one mouse by an operation and then by means of syringe apparatus are placed in the uterus of the foster mother. Heretofore an abdominal operation on the foster mother has been necessary.

The baby mice thus produced are not related genetically to the mother that gives birth to them.

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INVENTION

Patent Liquid Rouge Containing Perfume

► LIQUID ROUGE would replace the widely used solid face rouges in an invention for which Leola Silva, Oakland, Calif., received patent 2,578,210. The coloring material is in a solution of water and ethyl alcohol, both of which evaporate when the liquid is applied to the face. For coloring, one of several coal-tar dyes may be used to which is added mercurochrome. Perfume is also included. The thin film left after evaporation adheres strongly.

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Electric igniter to start the coal fire in a stove or furnace without kindling. Patent 2,549,806.

Light-weight concrete containing aluminum powder in an aqueous solution of a water soluble, organic sulphionate emulsifying agent to give increased resistance to water and heat insulation. Patent 2,534,915.

Better quality synthetic rubber containing calcium silicate as a reinforcing pigment. Patent 2,532,665.

Magnesium alloy, with tensile strength at elevated temperatures, utilizing the rare earth metals cerium, neodymium and praseodymium. Patent 2,569,477.

Wartime-developed radio beacon for guiding airplanes in flight by a coded signal. Patent 2,568,265.

Process for treating waste citrus liquors to obtain oil and other constituents. Patent 2,561,072.

Improved isoparaffinic aviation fuel for military and civil planes using minor portions of methyl substituted pyridines. Patent 2,560,898.

Stable insulating iron oxide coatings for ferrous metals which also protect against rusting. Patent 2,543,710.

High-lift airplanes requiring only a short runway and usable in areas where space for ordinary runways is lacking. Patent 2,541,704.

High-temperature stainless steel, usable where ordinary stainless steel can not be employed. Patent 2,540,509.

Ductile cast iron, containing zirconium, which can be used to replace steel in certain applications. Patent 2,538,263.

Electromagnetic ignition apparatus for fuel gas in the kitchen range or household furnace. Patent 2,536,468.

Silicone resin preparation to make brick and masonry walls water-repellent. Patent 2,574,168.

Fluid-tight, gas-tight case for ordinary cameras for taking pictures underwater or in gases that might ruin a film. Patent 2,573,885.

For invalids walk-in bathtub with a non-leak door on the side. Patent 2,570,053.

Vest-pocket capsule made of sugar and bicarbonate of soda and filled with an alcoholate for dropping in a glass of water to make a champagne-wine-like drink. Patent 2,537,453.

Improved cross-wind landing gear for airplanes. Patent 2,538,388.

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