VETERINARY MEDICINE

Stainless Steel Tails For Dogs Speed Healing

➤ YOUR dog may come home some day with a stainless steel tail. Treat him kindly. His real tail, underneath the steel, might have been run over by a truck, bitten by a bigger dog or caught in a revolving door.

Veterinarians in England are experimenting with stainless steel tubes as surgical dressings for injured tails, the American Veterinary Medical Association reported in Chicago.

The tubes work wonders, the vets report, by staying on dogs' and monkey's tails. These animals like nothing better than to bite, scratch, or pull off any covering on their posterior appendages. They find that difficult when the bandage is made of steel.

The tubes allow ventilation of the wound, thus promoting healing in a second way. They are held in place by a few turns of a special bandaging material, the British vets report.

Science News Letter, May 6, 1950

VETERINARY MEDICINE

Liquids Vital To Sick Dogs

➤ MORE important than drugs, blood or food for critically sick pets are liquids, Dr. E. E. Sweebe of North Chicago, Ill., told the national convention of the American Animal Hospital Association in Denver, Colo.

"A diseased animal can lose all of the fat and half of the protein in its body and still survive, but death may result if even one-fifth of the body's normal water reserve is lost," he said.

Solutions containing amino acids, highly nourishing protein substances, are used for dogs dehydrated by severe vomiting, diarrhea or fever. The liquids must be administered quickly if vital body fluids are being drained away by sickness.

Science News Letter, May 6, 1950

ENGINEERING

TV Coaxial Cable Replaced By Single Insulated Wire?

➤ A SINGLE wire with a special insulation and funnel-shaped terminals may replace the expensive, intricate coaxial cable now used in television transmission and in telephony.

This low-cost telephone and television transmission line was revealed in New York to the Institute of Radio Engineers by the inventor, Dr. George Goubau of the U. S. Army Signal Corps Engineering Laboratories, Fort Monmouth, N. J.

Another important application is in radar. An immediate use, according to Signal Corps officials, is an inexpensive means of distributing television programs to city homes on a "wired wireless" basis, which is now high in cost. It also may be possible to pipe television programs at relatively low cost to areas now out of television range; for instance, to midwestern farm belts.

The device is dubbed a "G-string" after the initials of the inventor. His work is based on a paper published in 1899 by A. Sommerfeld of the University of Munich. This paper had to do with wave propagation along a cylindrical wire of finite conductivity.

In Dr. Goubau's invention, a wire is used which is coated with a thin layer of a dielectric material. This results in a shrinking of the cross-section of the electric field that otherwise would extend far from the conductor. Transmission lines have been built and tested for their applicability for microwaves, he stated. The measured transmission loss is a fraction of that in coaxial cables, he said.

Science News Letter, May 6, 1950

MEDICINE

Bobby-Soxers Are Right—About Shoes

➤ THE "bobby-soxer" was given a pat on the foot by Dr. Carlo Scuderi of Chicago at the meeting in Chicago of the American Association of Industrial Physicians and Surgeons.

Coming generations, he said, will benefit from the bobby-soxer's introduction of a trend to low-heeled, broad-toed shoes.

Science News Letter, May 6, 1950

ENTOMOLOGY

Chemical Very Effective Against Mites

➤ TESTS of a new chemical show that it is highly effective against the tiny disease-carrying insects, called mites, that do millions of dollars' damage yearly to crops.

Dr. Oliver Grummitt of Western Reserve University reports in the journal SCIENCE (April 7) that di-(p-chlorophenyl) methylcarbinol is the most promising of a group of compounds related to DDT that he and his co-workers investigated.

Effective weapons against mites are indispensable since the widespread use of DDT. Not only is DDT against mites, but it promotes their growth by destroying insects that would otherwise destroy the mites.

At the concentration levels normally used, only mites are affected by this new class of compounds.

Red spider, European red mites, two-spotted mites, and Pacific mites can be controlled, he states. There is no danger of plant damage under ordinary spraying conditions. The chemicals poison through contact, Dr. Grummitt believes.

Science News Letter, May 6, 1950

IN SCIENC

INVENTION

Roller Skate Lights Show Fancy Skating Gyrations

➤ HEADLIGHTS for roller skates, an invention which has just received a patent from the government, shows the skater the rough spots in the pavement ahead. They also warn sidewalk pedestrians of approaching danger.

They have another use, however. It is in skating exhibitions where they would enable spectators to follow the movements of the skater with greater ease. They would not illuminate the wearer, however, but just the "underfoot" and the arcs, forward, backward or upward, of the skating feet.

Lights and batteries, similar to those in ordinary flashlights, are in a unit easily attached and removed from the under part of the skate. A tiny switch is used to turn the lights on or off. The inventor is Gerald L. Hooley, Urbana, Ohio. The patent number is 2,502,566.

Science News Letter, May 6, 1950

MEDICINE

Test Tube Stomachs Aid Fight Against Cancer

➤ TEST tube stomachs are helping scientists in Salt Lake City in the fight against stomach cancer, one of the leading causes of cancer deaths.

The stomachs go on functioning for an hour after being removed from their mice owners. They "even digest a hearty meal," Dr. H. W. Davenport, of the University of Utah, reported.

Vitamins, hormones and other factors are tested in these stomachs in an effort to learn what mechanisms influence formation of ulcers and cancer. The "most normal of normal mouse stomachs," found in a cancer-resistant strain of mice, C-57-Black, are used in the studies. The work is supported by the American Cancer Society.

Science News Letter, May 6, 1950

MEDICINE

Take Salt Before Heavy Job for More Benefit

➤ TAKE some salt before you go on the job, if you work in heavy industry or elsewhere in a very hot environment. More benefit comes from taking the salt before exposure to the heat than during or after such exposure, Dr. Simon Rodbard of Michael Reese Hospital reported to the American Association of Industrial Physicians and Surgeons meeting in Chicago.

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E FIELDS

PSYCHIATRY

Sexual Psychopath Does Not Exist; Abolish Term

➤ THERE is no such thing as a "sexual psychopath" and the term should be abolished, Dr. David Abrahamsen, Columbia University psychiatrist, declared at the second annual Forum for the Study and Prevention of Crime in New York.

He based this on a two-year study of 102 sex offenders at Sing Sing Prison.

The sex offenders, he found, make up a group of people who suffer from various types of mental disorders and social maladjustments. They all have in common sexual deviation, but this is found in other types of offenders. A study of 1,800 other inmates at Sing Sing who showed that 30% of them had committed sex crimes at one time or another.

"Sex offenders do repeat their crime," Dr. Abrahamsen stated. He found that 34 of the 102 had committed sex crimes prior to the offenses for which they had been committed.

Alcohol is a prominent factor when sex crimes are committed. It was often associated with or a precipitating cause of the crime in more than one-half the cases studied.

Persons who commit sex crimes should be sentenced in accordance with their personality makeup, not in accordance with the crimes they commit, Dr. Abrahamsen recommended. This is because sex crimes are "ordinarily the result of emotional conflicts and therefore personality makeup."

Science News Letter, May 6, 1950

PUBLIC HEALTH

Gnats May Be Source of Pink Eye

➤ YOUR vacation in the South and certain other sections of the country may some day be more enjoyable, if U.S. Public Health Service research on the problem of eye gnats turns up some means of controlling those pesky insects.

Dr. R. A. Vonderlehr, medical director in charge of the Service's Communicable Disease Center in Atlanta, announced that studies on the common eye gnat of the southern United States are underway at a field station at Thomasville, Ga. They will continue, he said, through the summer months, when the eye gnats are most prevalent.

The Public Health Service, however, is not primarily interested in eye gnats because they are a nuisance. Their scientists want to discover if the abundance of those insects in some parts of the country has any relation to the prevalence of conjunctivitis, commonly called sore eyes, or pink eyes.

Dr. Richard P. Dow, Communicable Disease Center entomologist at Thomasville, is in charge of the insect studies, under Dr. Dale R. Lindsay. Dr. Dorland Davis, of the National Institutes of Health, Bethesda, Md., directs the epidemiological studies, which are being conducted in Thomasville by Miss Virginia Hines and Miss Helen Cameron, Communicable Disease Center nurses.

Although eye gnats have been found in every section of the United States, they are most prevalent in California's Coachella Valley, the Rio Grande Valley of Texas, and in Louisiana, Mississippi, Alabama, Georgia, Florida, and South Carolina. They are most abundant wherever there is extensive farming or truck raising in sandy or muck soils in those states.

Science News Letter, May 6, 1950

PSYCHOLOGY

USSR Laborers Friendlier Than French to Germans

➤ RUSSIAN workers forced into labor in Germany during the war were more friendly toward their German bosses than were French workers and much more so than were Italian workers. And this in spite of the fact that Russian workers were singled out for the worst treatment by the Nazi authorities.

This sympathetic feeling of the Russian worker toward the Germans and a corresponding feeling of sympathy of the Germans toward the Russian workers was revealed by a re-examination of an opinion survey conducted by the U.S. Strategic Bombing Survey in Germany right after the end of the war in Europe.

The new conclusion was reported to the Eastern Psychological Association by Dr. H. L. Ansbacher, psychologist of the University of Vermont.

Such mutual friendliness in the midst of a general atmosphere of hostility is explained by Dr. Ansbacher as due to the fact that German industrial management often handled the Russian workers according to good principles of industrial relations and circumvented brutal Nazi regulations in order to do so. Friendliness was also favored by the fact that the Russians and Germans worked together in factories under conditions which were often better than the Russians had been accustomed to at home. Living conditions in Germany were also much better than those they had known in Russia.

"The hopeful conclusion for better international and inter-group relations," Dr. Ansbacher told the psychologists, "is that even in a generally hostile atmosphere areas of mutual goodwill are likely to exist because large groups are not uniform masses. If the conditions under which goodwill arose could be multiplied, the goodwill itself could be spread."

Science News Letter, May 6, 1950

MEDICINE

Cell Transplanting Method May Aid Cancer Fight

➤ PURE breed White Leghorn chickens can be made to grow up with dark patches of skin and feathers like barred Plymouth Rock chickens by a new technic of cell transplantation.

The cell transplanting, done when the chicks are in the embryo stage in the egg, is expected to lead to new knowledge of how cancer cells spread through human bodies and also to lead to new technics on use of hormones and drugs in medicine.

The experiments were reported by Drs. Paul Weiss of the University of Chicago and Gert Andres of the University of Berne, Switzerland, at the meeting of the National Academy of Sciences.

The cell transplantation is said to be the first successful attempt to inject separated cells into a growing body and trace their course as they pass through the blood circulation.

Ground tissues from barred Plymouth Rock embryos were injected into a vein of developing embryos of three-day-old or older White Leghorns. The injected cells passed through the hearts of the developing White Leghorns and out into the arteries. Then they escaped into the tissues, reached their normal locations in the skin and feathers and multiplied and differentiated there in normal fashion.

Acute disturbances in the circulation of the chickens were caused by these injected cells, killing about one-quarter of the developing embryos. Out of 340 injected, 23 survived past the hatching stage. And like cancer cells, the injected cells were seen to crowd out the normal cells.

Science News Letter, May 6, 1950

ENGINEERING

Microbes Damage Electric Cables Laid in Soils

➤ SOIL microbes, not soil chemicals, do the damage to rubber-insulated electric cables laid in the soil. And they do more damage to natural rubber than to the synthetics.

This is the conclusion of John T. Blake and Donald W. Kitchen of the Simplex Wire and Cable Company, Cambridge, Mass,. reported to the American Institute of Electrical Engineers.

It has been demonstrated, they stated, that the loss of insulating resistance in active soil was due neither to water absorption nor to the action of soil chemicals, but to the attack of living micro-organisms.

They stated also that certain microbes consume natural rubber hydrocarbons, leaving visible surface pitting, but there were no visible signs of attack on synthetic rubber insulation. In both cases, they added, action of the microbes caused lower insulation resistance.

Science News Letter, May 6, 1950