

in the hydraulic system. Also it must not undergo undue thinning at high temperatures and thickening at low temperatures. It should have low specific gravity to avoid undue weight to the plane.

Ordinarily, the hydraulic fluid is completely confined within the hydraulic system, which includes piping extending to

many parts of the plane. Occasionally, due in part to the high pressures used, the system springs leaks. A leak causes the fluid to be expelled as a fine spray. If it is flammable, it may catch fire from exhausts, from contact with the hot manifold, or from sparks from the plane's electric system.

Science News Letter, October 30, 1948

MEDICINE

Insecticide Cures Itch

➤ A PREPARATION made from an insecticide in a vanishing cream base may be the best cure yet found for scabies, popularly called "the itch."

It may also be effective in getting rid of lice.

Complete cures of scabies resulted in 61 patients after one treatment, in 36 patients after two treatments and in three patients after three treatments with hexachlorocyclohexane, Drs. A. Benson Cannon and Marvin E. McRae of Columbia University and the Vanderbilt Clinic in New York, reported in the *JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION* (Oct. 23).

The advantages of this preparation over the older ones such as sulfur and benzyl benzoate are that it produces no irritation or sensitivity to the drug and has proved effective in cases in which the other preparations have failed.

The physicians cite the case of a man who had a widespread persistent eruption of scabies for over four months. He was treated with sulfur ointment and benzyl benzoate without any relief. After one application of hexachlorocyclohexane cream the rash and itching disappeared.

Specimens of the itch mite were obtained from each patient to confirm the diagnosis. This was done by inserting a sharp needle into the beginning of the burrow made by the mite, a painless procedure as the burrow is confined to the horny layer of the

skin, and withdrawing the mite on the needle point.

The procedure then was to rub a thin film of the cream from the neck to the sole of the feet without allowing the patient to wash beforehand. After 24 hours he was allowed to bathe and was asked to use fresh underwear and night clothes and to change the bed linen. Members of his family were also examined and received treatment if they were infected.

Army medical investigators had previously found the drug important in the control of chiggers, ticks, fleas, cockroaches, bedbugs and lice. It was used as a spray on uniforms and in field fumigation.

Science News Letter, October 30, 1948

CHEMISTRY

Clicking Counter Warns of Poison Lead in the Air

➤ A DETECTOR for poisonous lead in the air that clicks madly in warning similar to a Geiger counter affected by radioactivity was announced to the Optical Society of America meeting in Detroit, by Henry Aughey, of the DuPont Experimental Station, Wilmington, Del., and O. G. Koppius of the Philips Laboratories.

Atmospheric contamination by lead is an acute problem in the chemical industry.

The new instrument can be carried about to test air wherever the danger of this accumulative poison exists. It is extremely sensitive and gives an approximate assay of the air in addition to detecting relatively high concentrations of lead, whether combined chemically or in its form as an element.

Suspected air is drawn through a spark discharge, the light from which is caught and split up by a quartz spectroscope. The tell-tale lines of lead are measured in two ways: Photographically or by substituting a photoelectric Geiger counter for the photographic plate. As little as one part in 20,000,000 of lead can be made to register as the warning counter clicks.

Science News Letter, October 30, 1948

SCIENCE NEWS LETTER

Vol. 54 OCTOBER 30, 1948 No. 18

58,700 copies of this issue printed

The Weekly Summary of Current Science, published every Saturday by SCIENCE SERVICE, Inc., 1719 N St., N. W., Washington 6, D. C., North 2255. Edited by WATSON DAVIS.

Subscription rates: 1 yr., \$5.50; 2 yrs., \$10.00; 3 yrs., \$14.50; single copy, 15 cents, more than six months old, 25 cents. No charge for foreign postage.

Change of address: Three weeks notice is required. When ordering a change, please state exactly how magazine is now addressed. Your new address should include postal zone number if you have one.

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Printed in U. S. A. Entered as second class matter at the post office at Washington, D. C. under the act of March 3, 1879. Established in mimeographed form March 18, 1922. Title registered as trademark, U. S. and Canadian Patent Offices. Indexed in Readers' Guide to periodical literature, Abridged Guide, and the Engineering Index.

Member Audit Bureau of Circulation. Advertising Representatives: Howland and Howland, Inc., 393 7th Ave., N.Y.C., Pennsylvania 6-5566 and 360 N. Michigan Ave., Chicago, STAt 4439.

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