

of spring millinery can be obtained from at least the straiter-laced members of the clergy.

One very odd pagan note might be added. It comes from a part of Europe saturated in Christian history from very early times: Westphalia, where the intensely Catholic population still flock to Mass on Sundays and holy days, despite Hitler, Himmler and the Devil himself. There, in the traditional home of fine smoked pork products, the farmer folk cook the first of their winter's curing of hams for Easter dinner, and they call the day *Schinkenonntag*, which Englishes as "ham Sunday." What can this be but a far-off echo of the pre-Christian cult of ancient Germany, which saw in the prolific pig a symbol of fertility, abundance and good luck generally?

*Science News Letter, April 24, 1943*

#### PHYSIOLOGY

### Female Rats Age When Deprived of Tryptophane

► FEMALE RATS grow old before their time, failing to produce young even though recently mated, if they do not receive in their diet one of the essential fractions of protein known as tryptophane, one of the amino acids. Experiments indicating this are reported by three Johns Hopkins University physiologists, Dr. Anthony A. Albanese, Dr. Romaine McI. Randall and Dr. L. Emmett Holt, Jr. (*Science*, April 2).

Earlier researches by other scientists had already shown tryptophane lack to be an aging factor in male rats, causing loss of hair, defective teeth, degeneration of eyes and reproductive failure.

The three Johns Hopkins investigators first mated a group of mature, vigorous female rats. Then they placed part of them on a diet lacking in tryptophane, keeping the rest on a normal diet as controls. The control animals all bore normal litters, while the others, after developing symptoms similar to those seen in similarly treated male rats, all failed to have any young.

They point out a possible practical application of their research, in the livestock industry. Poor reproductive capacity has often been noted in animals on low-protein diets. The Johns Hopkins physiologists raise the question whether the lack of tryptophane is not the actual difficulty in such situations.

*Science News Letter, April 24, 1943*

Almost any organic matter can be used to produce industrial *alcohol*.

## • New Machines and Gadgets •

⊗ **GRINDING** high-speed lathe cutting tools is expedited by use of a specially designed fixture holding 18 tools at a time. Precision grinding results and tool life efficiency is increased.

*Science News Letter, April 24, 1943*

⊗ **A RUBBER LUNG** has been devised to insure successful and safe artificial respiration. Strapped to the back or stomach of a shock or drowning victim, the apparatus is said to activate muscles which gently draw air in and out of the lungs until natural breathing is restored.

*Science News Letter, April 24, 1943*

⊗ **A NEW PENETRATING** liquid sloshed on cement floors is said to make them dustproof and crumbleproof. Applied to surfaces that are to be painted, it will also keep moisture from entering the material.

*Science News Letter, April 24, 1943*

⊗ **PLASTIC COVERSLIPS** are now used to cover specimens for examination under the microscope. They replace the extremely thin handcut glass formerly imported from Japan and Czechoslovakia. Besides having all the desirable properties of the fragile glass, the plastic is unbreakable and only about one-fourth as expensive.

*Science News Letter, April 24, 1943*

⊗ **TIME REQUIRED** to check the maze of electrical installations in warplanes is cut from about 18 hours to 15 minutes by a recent invention. It checks hundreds of wires for proper wiring and



shorts, indicating which ones are bad and where. Operating principle of the tester is based on the fact that the main switch box is the heart of a plane's circuit.

*Science News Letter, April 24, 1943*

⊗ **RIVET SORTING** machines save much time formerly consumed by hand sorting. In a big aircraft factory many pounds of rivets are dropped each day which are gathered up in the sweepings and salvaged. The sorting machine is a battery of four revolving cylinders with different size perforations which sorts them by sizes. They are then separated by head types and finally by their lengths.

*Science News Letter, April 24, 1943*

⊗ **HEALTH BOMB** is a new metal dispenser which holds one pound of insecticide spray under compression. The spray is released by pressure on a trigger. A single 6-inch dispenser can fumigate 150,000 cubic feet of space.

*Science News Letter, April 24, 1943*

⊗ **A RESIN** and oil emulsion paint, especially designed for use over wall-paper, seems to provide all the advantages of flat oil finishes. It is mixed with half its volume of water and applied with a brush, drying in about an hour. It is washable after 20 to 30 days when the oil-resin film in the emulsion has oxidized.

*Science News Letter, April 24, 1943*

If you want more information on the new things described here, send a three-cent stamp to SCIENCE NEWS LETTER, 1719 N St., N. W., Washington, D. C., and ask for Gadget Bulletin 153.

British engineers are reported to be using waste paper to make expansion joints for the concrete runways on airfields.

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