



Texaco

**BORON FIBER**—A scientist is testing the tensile strength of the first fiber ever made from boron. The new thread, developed by Texaco Experiment Inc., under contract with the U.S. Air Force, is stronger than steel, five times stiffer than glass fiber, lighter than aluminum and has a melting point of over 3,600 degrees Fahrenheit. It may have use in the manufacture of lighter and more heat resistant rocket cases.

## SURGERY

## Severe Bladder Defect Repaired by Surgery

► ONE OF THE MOST severe abnormalities with which a child can be born—exstrophy, or a turning inside out, of the urinary bladder—can now be corrected.

Other abnormalities accompanying this defect include unformed sex organs, missing front of the abdominal wall and a deficient pubic bone across the front of the body.

In the past, surgeons have removed the bladder and placed ureters in the intestine, but this has been especially unsatisfactory in small children.

Now surgeons at the Columbia University College of Physicians and Surgeons have replaced 65 children's bladders in their abdomens, reformed their reproductive organs and repaired the large defect in the abdominal wall.

Dr. John K. Lattimer of Columbia reported to the American College of Surgeons' sectional meeting at Pittsburgh, that all operations may not be successful. Nevertheless, every child with this severe condition should have the benefit of at least one attempt at "functional closure and repair of the abdominal wall." Nothing will be lost by this attempt as other methods can always be used later if necessary, he said.

The desperate plight of the patients before the operation is replaced with a normal appearance and almost normal function.

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## BIOCHEMISTRY

## Hair May Be Monitor Of Strontium-90 Fallout

► HUMAN and animal hair may offer scientists a new, non-destructive way of monitoring strontium-90 fallout, scientists have discovered.

To see if hair has detectable amounts of strontium-90, rats were injected with the radioactive element, Drs. B. J. Hopkins, L. W. Tuttle, Walter J. Pories and William H. Strain of the University of Rochester (N.Y.) School of Medicine and Dentistry reported in *Science*, 139:1064, 1963.

The highest level of strontium-90 activity was found in the hair of the adult animals injected 18 days to two months before the analyses were made. The hair of the control rats not injected with the element showed no activity.

While hair analysis may provide a method for estimating the strontium content in bone, calculations of the normal range of the strontium and calcium content in humans and laboratory animal hair are still required.

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## BIOLOGY

## Mink Food Lake Fish For Human Consumption

► A LOW PRICED mink food, the fish cisco, will be upgraded into a pan-ready frozen fillet for human consumption. The frozen foods departments of stores will soon carry new and distinctive packages of an age-old fish, the Lake Superior cisco, if recommendations of Dr. Peter Tack, of the department of fisheries and wildlife at Michigan State University, are followed.

In the past, almost all cisco fishing was done in the fall months, when the fish came to shallows to spawn and were taken by nets floated just beneath the surface. However, a new technique of setting nets in deeper water 18 to 40 feet beneath the surface now enables fishermen to make good cisco catches for 9 or 10 months of the year, Dr. Tack told a commercial fishermen meeting in Marquette, Mich.

The former fall concentration in cisco fishing produced an unmarketable surplus. With the new method, fishermen voluntarily limit their catches to prevent crushing in packing. Studies must be made to determine the number of fish that can safely be packed in one package.

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## MEDICINE

## Dieting to 'Make Weight' Harmful to Athletes

► TWO WRESTLING competitors collapsed before they could even take part in a tournament because they had been on starvation diets to reduce weight.

The practice of placing high school and college boxers and wrestlers on such diets so they can "make weight" for a particular event has been strongly criticized by two national associations.

Strength and stamina are reduced by these drastic diets, the American Medical Association's Committee on the Medical Aspects of Sports and the National Federation of State High School Athletic Associations report in a joint statement in Chicago.

Contestants usually weigh in before each event, resulting in an intense effort to lose weight beforehand. Then there is a quick reversal to regain as much weight as possible prior to the contest, but the food eaten between the weigh-in and the match cannot be metabolized in time to restore energy lost.

One remedy for the situation would be to have all athletes weighed on an unannounced day.

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## ENTOMOLOGY

## Poisons More Available To Insects in Damp Air

► INSECTS take up more poisons when the air is damp than when it is dry, mainly because the insecticides are more available.

The increased availability of dieldrin in humid conditions was confirmed by P. Gerolt at the Woodstock Agricultural Research Center, "Shell" Research Ltd., in Kent, England.

Tests were carried out in glass tubes, where insects were exposed to the dieldrin on the inner surface of the tubes. Relative humidity was varied by feeding either dried or humidified air through the tubes.

After exposure, extracts of both the insects and the remaining insecticide residue on the glass were determined, Mr. Gerolt reports in *Nature*, 197:721, 1963.

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## NUTRITION

## "Instant" Buttermilk Produced by Acid

► IT NOW TAKES only 30 minutes to make smooth, tasty sour cream or buttermilk from cow's milk—instead of the usual 18 hours.

A new process of adding a stabilizing agent and then edible acid to milk and cream has been developed by scientists at Battelle Memorial Institute in Columbus, Ohio. Taste panelists report the resulting dairy products taste better and can be stored longer than other commercial samples.

Nature usually takes her own "sweet" time to produce sour cream and buttermilk. Bacteria occur naturally in milk or cream, and as they grow they produce a lactic acid that gives the distinct taste and texture to milk or cream. Left to itself, this natural process can take days. In more recent years, people learned to speed up the action to 18 or 24 hours by adding some of the proper bacteria to start the process.

Now the bacteria are not needed at all with the new jiffy man-made process, invented by Lawrence L. Little. The stabilizer and the acid do the work once done by bacteria. Yogurt may be made by much the same method, which is called the stabilized acid process.

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