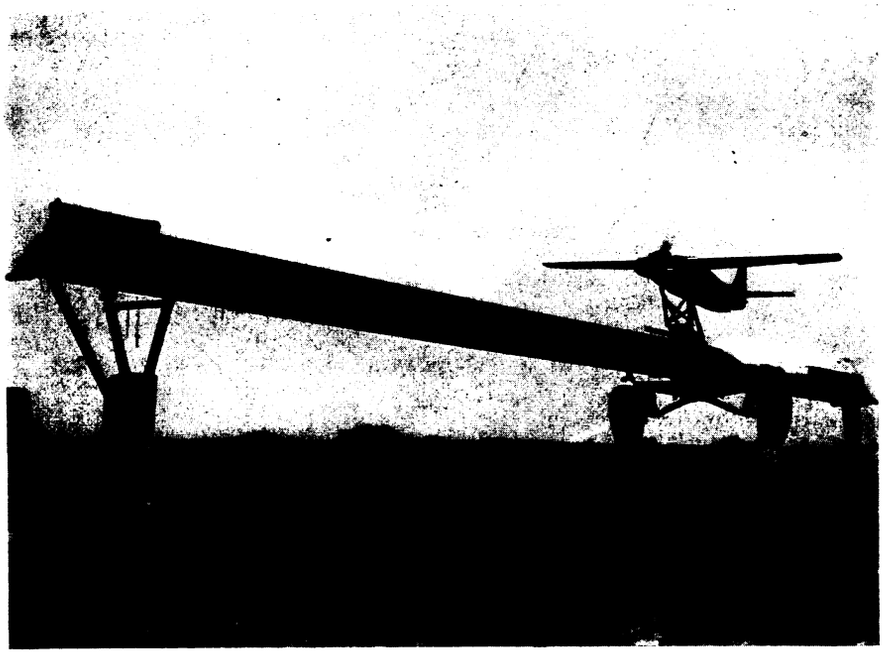

REMOTELY-CONTROLLED TARGET PLANE—The OQ-19A is shown taxiing along its ramp for takeoff. It has a speed of 220 miles an hour and weighs approximately 300 pounds. The target plane will be used for aircraft, anti-aircraft and flexible gunnery practice. Remotely controlled from ground or air, the puppet plane is capable of high speed dives, loops, barrel rolls, wing overs and steep banks. It will fly for 60 minutes without refueling.

MEDICINE

Test Blood for Cancer

Detection of this disease may be aided by a test reported to spot cancer in 75% of the cases. It reveals the ability of a chemical in blood to digest protein.

➤ DOCTORS and cancer research workers will be asking: "Do we at last have a blood test for cancer?"

Three Yale University School of Medicine scientists are reporting such a test that spots cancer in 75% of the cases. It may prove valuable in detecting cancer before it shows clinical signs, just as X-ray photographs can discover early tuberculosis.

The test developed by Drs. Donald G. C. Clark, Eugene E. Clifton and Berne L. Newton is actually one that tells whether the serum in human blood stops the ability of a body chemical (an enzyme like trypsin) to digest protein.

The relation of this anti-enzyme activity of the blood to the presence of cancer is so close that all patients who show consistently high anti-enzyme activity by the test should have "extremely careful observation," the scientists state in a report to the PROCEEDINGS OF THE SOCIETY FOR EXPERIMENTAL BIOLOGY AND MEDICINE (Nov.).

In patients with cancer 75% gave a positive test. The test results were doubtful in 18% of the cancer patients and negative in only 7%.

In patients with tumors that were not malignant, there were no positive reactions, 25% doubtful ones and 75% negative ones.

Among apparently healthy persons there were only 2% positive tests, 17% doubtful ones and 81% negative.

The test was 90% successful in detecting cancer in patients who had recurrences after treatment.

The 7% of cancer patients in whom the test failed were all patients with either: 1. tumors of borderline malignancy, or 2. very small cancers or 3. extensive last stages of cancer or rapidly spreading cancer.

Further study, the scientists hope, will lead to a more specific test for cancer but meanwhile they feel the test is better for finding patients needing more detailed examination than the usual screening procedures at cancer detection clinics.

Science News Letter, January 1, 1949

MEDICINE

Scare Over Fits May Lead To New Facts About Brain

➤ DUE TO the scare over convulsions in dogs caused by a flour-bleaching agent, agene, now abandoned, we may learn more about how the brain and nervous system operate and the fundamental mechanisms of convulsions.

Brain wave studies pointing to this were reported by Dr. Maurice L. Silver of the Johns Hopkins Hospital, Baltimore, in the journal, SCIENCE (Dec. 17).

Brain wave patterns for convulsions caused by agenized proteins of wheat, corn and milk are characteristic and significantly different from the patterns produced by other convulsion-causing drugs, such as Metrazol or strychnine. Agene convulsions, like those of DDT, are unique, Dr. Silver pointed out.

The agene convulsions start in the cerebellum and apparently this part of the brain then "drives" the cerebral cortex, or thinking part of the brain, into convulsions.

"Somewhat surprising" also was the discovery that a dog on a bleached diet for three days will have a convulsion after inhaling a mixture of 20% carbon dioxide and 80% oxygen. Carbon dioxide, Dr. Silver points out, is known to have a depressant effect, on both the cerebral and cerebellar cortex.

Science News Letter, January 1, 1949

INVENTION

Invention Makes Car Put On Own Anti-Skid Cleats

➤ TIRED of putting on tire chains with half-frozen fingers? Relief from this wearing winter chore is promised by a pair of San Francisco inventors, Dola F. Miller and Frank Puslecki. They have devised a set of anti-skid cleats that are carried alongside the wheels at all times—and the wheels themselves have to do the work of attaching and removing them.

These cleats consist of flexible steel fingers covered with blocks of rubber. When not in use, they are housed in radial grooves in a disk on the inner side of the wheel. A second disk, with a spiral groove, engages the inner ends of these fingers when pressed against them, and as the wheel slowly turns moves the fingers out and over the tire. The disk is operated from the driver's seat by suitable lever-and-rod connections.

Once the anti-skid cleats are in position, the pressure of the spiral-grooved disk is eased, and the car is free to move ahead at a safe winter speed. When the going becomes better again, the disk is again pressed against the cleat ends, but the car is slowly backed this time, and the reversal of movement causes the withdrawal of the cleats.

U. S. patent 2,456,438 has been issued on this device.

Science News Letter, January 1, 1949