

Pacific, it will occur on two days. Instead of being a total eclipse, it will be an annular one with the moon appearing slightly smaller than the sun and thus at maximum being surrounded by a narrow ring of light.

The exact time when the moon's edge first touches the sun, when the ring of light first shows around the moon, when the ring disappears as the moon moves on and when the edges of the sun and moon part company, all four will be accurately clocked. These contacts will come at different times at the various observing stations along the eclipse path.

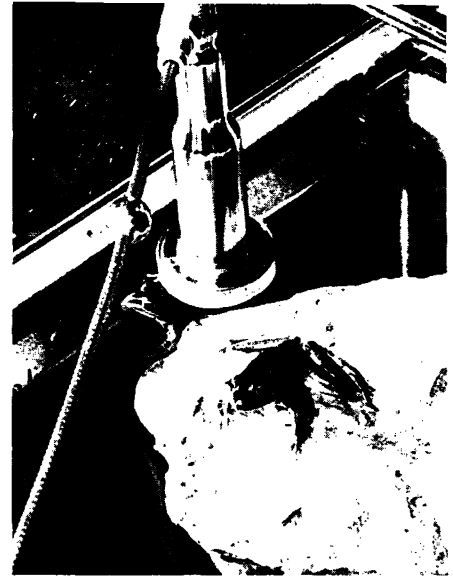
The difference in time of contacts as measured at any two stations makes it possible to calculate with great accuracy the distance between these two stations, and to locate their relative positions on the earth's surface with an

error of not more than 150 feet. This helps determine very exactly the shape and size of the earth.

Measurements of the times of contact of the sun and moon will be made by photographing the eclipse on 35-millimeter sound motion picture film. The one-per-second ticks of a chronometer, checked for accuracy with radio time signals, will be recorded on the sound track. A comparison of the eclipse contact pictures with the time marks on the sound track alongside them will permanently record the exact moment of the contacts.

The U. S. Army's Map Service, Engineers and Signal Corps, the Navy, Air Force, Bureau of Standards, Coast and Geodetic Survey and State Department are cooperating with the Society in the project.

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**RADIOACTIVE FROGS**—Visitors to the Atomic Energy exhibit at the Museum of Science and Industry in Chicago have the privilege of operating a detector probe which turns on blue, green and red lights as the "hot" or radioactive frogs are approached. This dramatizes for the layman the use of radioactive substances employed as "tracers" in the fields of biology and preventive medicine.

#### MEDICINE

## Conflict Root of Illness

Patient described as filibustering in the doctor's office in an unconscious attempt to hide the root of his illness, which is body's reaction to mental conflict.

► **FILIBUSTERING** is a medical symptom, says Dr. Andrew D. Hart, of the University of Virginia School of Medicine.

The filibustering he described is that done by patients in doctors' offices, not the Senatorial variety.

He lists it with other symptoms of psychosomatic illness in a report to the *Journal of the American Medical Association* (Jan. 24).

The patient who filibusters is doing it in an unconscious attempt to keep the doctor from finding out what is really causing the illness. Dr. Hart gives as an example a 50-year-old woman confined to a wheel chair with deforming arthritis, or rheumatism. For the five years she had been rheumatic, she successfully resisted efforts to start proper treatment of her symptoms.

Each time she saw the doctor, she took up the entire time with an exhaustive account of her numerous symptoms and feelings, or would get onto discussions of politics and what her family and friends were like and what they said. Every time the doctor tried to steer the interview back to what things in her life or personality might account for the arthritis the patient got off onto another

subject and did some more filibustering.

Patients with stomach ulcers, heart disease, overweight and headaches may do the same thing, if their physical symptoms and illness are psychosomatic. The psychosomatic illness, Dr. Hart explains, is the body's reaction to mental conflict so severe that it has to be repressed. Unconsciously the patient feels that even painful, disabling physical symptoms are not as bad as the conflict of feelings he is repressing. So, though he consciously wants to feel better, he unconsciously resists efforts to get at the cause of his troubles.

Procrastination in seeking treatment, self-treatment, "medical shopping," sabotage of treatment and patronizing medical cults are other symptoms Dr. Hart says will help diagnose psychosomatic illness.

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#### MEDICINE

## New Test for Pregnancy Utilizes Common Frogs

► **MALE** frogs of the commonest American species can now be used as test animals in detecting early pregnancy in women. They will be used in place

of the much more costly tropical frogs and toads recently recommended and the mice used in the first technique of the kind to be described, known as the Ascheim-Zondek test.

The new test is described by a Columbus physician, Dr. P. B. Wiltberger, and Prof. D. F. Miller of the Ohio State University, in *Science*, (Feb. 20). A small quantity of urine from the patient is injected into the body of a male leopard frog. If she is pregnant, the frog begins to discharge his male sex cells in from two to four hours.

For the sake of certainty, Dr. Wiltberger recommends the use of two or more frogs for each test. This does not involve any appreciable extra expense, partly because the frogs are so abundant and easy to obtain in the first place, partly because the same frogs can be used again and again, with four- to five-day intervals between tests.

The leopard frog is the species known to zoologists as *Rana pipiens*. It is the first animal students are given to dissect in beginning zoology courses.

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