

recognize that they have much to learn about how this new device works and the possibilities that lie in the metal of which it is made.

Germanium is one of the purest of metals as it is used in these new electronic devices. There is not much of it available, as it has been a by-product of recovery of cadmium and zinc. It costs from \$100 to \$200 a pound.

Also Rectifies Current

Another property of germanium is that of rectifying electric current, that is, changing alternating to direct current. In this, processed germanium metal operates more efficiently than existing rectifiers of selenium and copper oxide. The General Electric Co. rates the germanium rectifier, made in a form not much larger than a thimble, as perhaps the best rectifying metal yet discovered.

When the transistors as they are developed in the future are combined with the printed wire circuits that replace wires with streaks of metallic ink or paint, the electronic devices of the future will be smaller and probably cheaper. With transistors, a two-stage amplifier can be fitted into a match box. The dream radios of fiction may not be too far in the future.

Science News Letter, March 1, 1952

MEDICINE

New Stomach Juice Test May Aid Cancer Diagnosis

► FINDINGS THAT may lead to a new aid for diagnosing cancer of the stomach are reported by three cancer researchers, Dr. Shields Warren of New England Deaconess Hospital and D. Rourke Gilligan, biochemist, and J. Rothwell Moor, research technician, of the Harvard Cancer Commission.

Cancer patients these researchers find, have in their stomach juices more free and peptide amino acids than normal persons or patients with ulcers.

The ulcer patients had the same amount and kind of amino acids as the normal persons. The amino acids are the building blocks of protein. The amounts and kinds in the stomach juices of the patients and normal persons after fasting were determined by paper-partition chromatography.

The stomach cancers in the patients in this study were far enough advanced so that they could be diagnosed by X-ray and clinical methods. In one case, however, it was not possible to tell by X-ray and other usual methods whether the patient had stomach ulcer or stomach cancer. In this patient, the chromatogram of the stomach juice resembled that of the other patients with stomach cancer.

Whether this method will prove an aid to early detection of stomach cancer can only be discovered by further studies, Dr. Warren and associates state in their report to the JOURNAL OF THE NATIONAL CANCER INSTITUTE (Dec. 1951).

Science News Letter, March 1, 1952

VETERINARY MEDICINE

Cattle Owners Underrate Need for Strict TB Control

► CATTLE OWNERS have been under-rating the need for strict, continuing eradication measures against tuberculosis, the American Veterinary Medical Association in Chicago charged.

In a few sections of the country, bovine tuberculosis is definitely on the increase, although the overall U. S. rate for the disease in 1951 is the lowest since 1943.

The Association urged the cooperation of all farmers and veterinarians in continued testing of cattle and the elimination of all animals that react to the tuberculin test. Bovine tuberculosis is communicable to humans.

Science News Letter, March 1, 1952

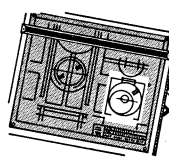
The world's largest flesh-eating *mammal* is the Kodiak brown bear.

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