BLOOD COUNT BY TV—To make a quick count of human blood cells, an electronic "brain" has been joined with a television "eye" by scientists at RCA's David Sarnoff Research Center, Princeton, N. J.

ELECTRONICS

Electronic Blood Counts

➤ AN ELECTRONIC "brain" has been joined to a television "eye" to yield a mechanical laboratory technician that can beat a human specialist in counting blood cells.

Called the Sanguinometer, the device may detect in record time the number of persons overexposed to atomic radiation in the event of a hydrogen-bomb attack upon this country.

In experiments, it has clicked off this laborious, time-consuming process several times while a human laboratory technician, working without aid from the machine, did only one blood count.

The device uses a television camera to peer into a microscope. The camera flashes what is "sees" on a monitoring video screen. It also sends electronic pulses to the input of an electronic computer. Each pulse indicates that the TV camera's electron beam, sweeping the microscope specimen, has encountered a cell.

The electronic "brain" keeps track of the total number of pulses the camera sends it. Then the computer makes the proper corrections, since the electron beam would ordinarily strike a given cell several times.

In tests, the Sanguinometer has shown only a small margin of error on a count of many varieties of microscopic particles as long as the particles within any one specimen are nearly uniform in size.

Believed to be a useful research tool and laboratory aid, the Sanguinometer was developed by RCA engineers working with scientists of the Sloan-Kettering Institute, a research unit of the Memorial Center for Cancer and Allied Diseases.

Science News Letter, January 23, 1954

BOTANY

B-Vitamins Concentrated In One Wheat Layer

➤ THE B-VITAMINS in a grain of wheat are concentrated in one of the grain's outer layers, Drs. J. J. C. Hinton and B. Shaw and F. G. Peers have found in experiments at St. Albans, England.

The aleurone layer, a part of the bran, constitutes less than 7% of the weight of the grain. However, it has 31% of the vitamin B-1, 84% of the nicotinic acid, 39% of the pantothenic acid and 37% of the riboflavin or vitamin B-2.

The scientists first dissected wheat grains into layers, and then tested each layer for B-vitamins. Nicotinic acid and pantothenic acid are commonly called B-complex vitamins.

The B-vitamins and minerals in the aleurone layer do not appear to play a decisive role in the development of the embryo plant, the scientists report in *Nature* (Nov. 28, 1953.)

Science News Letter, January 23, 1954

MEDICINE

Cortisone Speeds Face Paralysis Recovery

➤ CORTISONE, first famous for relief of crippling, painful arthritis, shows promise of becoming a speedy remedy for Bell's palsy, also known as facial paralysis.

Two children afflicted with this ailment recovered completely in 13 and 17 days, respectively, under cortisone treatment, Drs. W. P. Robison and B. F. Moss of the Medical College of Georgia, Augusta, Ga., report in the *Journal of the American Medical Association* (Jan. 9).

In their experience no patient seen in 15 years has recovered from this paralysis in less than several months. The Augusta doctors point out that results in two cases do not warrant sweeping conclusions, but they call attention to an earlier report of Dr. H. H. Rothendler of New York who treated six Bell's palsy patients successfully with cortisone.

The treatment apparently must be started early in the course of the paralysis, since a seventh patient of Dr. Rothendler's who had had paralysis for 10 days before cortisone was started did not respond to the treatment. Tests before the cortisone was started had showed signs of nerve destruction in this patient.

The cause of Bell's palsy is not known. It is a common disorder that may attack from infancy to old age. Dr. Rothendler reported that he thought cortisone helped by reducing congestion and related local deficiency of blood of the facial nerve and its sheath in the bony canal.

Science News Letter, January 23, 1954

SEISMOLOGY

Earthquake Recorder Can Spot Hurricanes

➤ HURRICANE PATHS can be spotted with seismographs, the instruments that record earthquakes, Dr. William L. Donn of Columbia University, New York, reports in *Science* (Jan. 8).

Lives of Navy and Air Force pilots on hurricane patrols and thousands of dollars in operational expenses may eventually be saved due to the finding of this shore-based method for charting hurricanes.

Seismographs record not only destructive, earth-jarring quakes, but tiny little fluctuations known as microseisms. Recordings of these microseisms are Dr. Donn's clue to the hurricane's path. This is because the time taken for one fluctuation—from two to six seconds—varies with the depth of the water over which the storm is passing. The depth of the sediment on the ocean floor may also have an effect.

His study of microseism periods in the Gulf of Mexico, the Caribbean Sea and the western North Atlantic Ocean shows "a definite relationship between microseism period and storm position," Dr. Donn declares.

Science News Letter, January 23, 1954