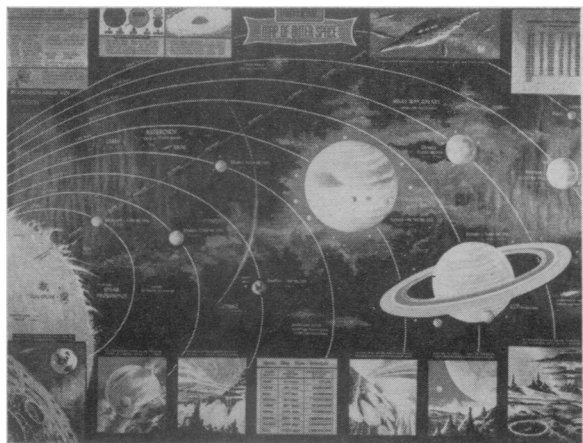


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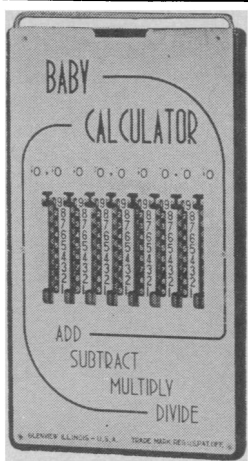
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## Questions

**BIOLOGY**—How have cancer cells been altered to make them useful as a vaccine? p. 264.

**ENGINEERING**—How long will the Illinois road test last? p. 265.

**NUTRITION**—What are the symptoms of the disease kwashiorkor? p. 259.

Photographs: Cover, North American Aviation, Inc.; p. 259, U.S. Army; p. 261, University of Michigan; p. 263, Albert Lasker Awards-American Public Health Association; p. 272, Kansas State Engineering Experiment Station.

## MEDICINE

### Water on Brain Routed To Reservoir, Gallbladder

► THE EXCESSIVE WATER on the brain of one newborn is successfully being channeled by surgery into a reservoir made from a segment of the small intestine.

The water is absorbed through the lining of the reservoir and eliminated. The operation was performed on an infant whose head was rapidly swelling from the condition known as hydrocephalus. Drs. Charles G. Neumann, Thomas I. Hoen and Donald A. Davis of the departments of surgery and neurosurgery, New York University Postgraduate Medical School and Bellevue Hospital, reported the case at the meeting of the American College of Surgeons in Chicago.

The gallbladder was also suggested as a useful reservoir for excess water by three surgeons at the Medical College of Georgia at Augusta. Drs. George W. Smith, William H. Moretz and William L. Pritchard said their studies on animals and humans revealed that the gallbladder is biologically suited to continually receive, absorb and conduct the cerebrospinal fluid over long periods.

The fluid empties from the brain into the gallbladder by means of a polyethylene tube with a special valve to prevent back flow.

Hydrocephalus is a somewhat common condition in the newborn. The head is abnormally large because of an excessive amount of cerebrospinal fluid within the brain. The size of the head may become so enlarged that it compresses the brain and leads to mental impairment.

Several surgical procedures have been developed to deal with the condition but there is no consensus on a totally satisfactory method. The procedures either shunt the fluid around the body to an absorption site or reduce the formation of fluid.

Science News Letter, October 25, 1958

## Do You Know?

A *watershed* is the drainage area of all the tributaries flowing into a reservoir.

The *Milky Way Galaxy* is round and flat with outward-spiraling pinwheel arms.