

## ELECTRONICS

**Rest, Shock Operate To Make "Brains" Work**

➤ WHEN THE so-called electronic "brains," which are actually computers of various sorts, stop or balk or become cranky or difficult, the engineers who run them treat them somewhat the way a psychiatrist handles a human mental patient.

First, a "brain" is given a rest, that is, it is stopped. Then it is slowly and carefully put back into operation. This may make it stop making mistakes or remedy its otherwise not operating correctly.

If such gentle "rest cure" tactics are not effective, the operators may resort to a shock treatment, just as some kinds of mental illness are aided by electric shock treatments. The machine is actually given a sudden overvoltage. This may set it to working again.

Sometimes a swift, positive kick will jolt it back into proper operation.

Such treatments failing, the engineers may have to resort to the mechanical or electronic equivalent of surgery. They may tear out a part or several parts and replace them or repair them, with even greater facility and ease than a surgeon can operate on the human body.

Sometimes machines fail to operate for very simple reasons. Beside a complex mechanism in a government laboratory this advice is posted: "Plug it in. Turn it on. Check the fuses."

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## ASTRONOMY

**Stars and Moon Now Photographed Clearly**

➤ CLEAR PICTURES of the moon in its exact position against a background of stars have now been made by a new method developed by Dr. William Markowitz of the U. S. Naval Observatory.

With the new type of camera, astronomers are now able, without blurring, to photograph the moon as it races through the sky along with fainter, more stationary stars. It is essential for accurate measurements that the moon and the background stars be photographed simultaneously and without blurring.

Both the moon and the stars are tracked by the new instrument during the 15 seconds or so needed to get the fainter stars to show up on a photographic plate. A dense, tilting filter that cuts out most of the moon's relatively bright light is the key part of the device.

It eliminates all but a thousandth of the moon's light so that the surrounding stars show up clearly. The filter rotates at a regular speed and apparently makes the moon stand still with respect to the stars long enough to get them to show up in detail on the time exposure.

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**STARFIRE'S NEW LOOK**—Plastic surgery has given a new shape to the nose of Lockheed's F-94C Starfire jet interceptor. The change-over increased air speed five miles an hour.

## PSYCHIATRY

**Mental Ills Can Be Cured**

One authority believes that 85% of the Americans suffering from mental illnesses could be cured if they were given proper treatment in time.

➤ AT LEAST nine million Americans, one in every 16, are suffering from a mental or emotional disorder. Nearly 700,000 victims of serious mental disease crowd our hospitals.

Most of them, as many as 85% according to one authority, could be cured if they could be given the proper treatment early enough.

These facts and figures among other shocking ones were noted by the National Association for Mental Health which sponsors national Mental Health Week during May. The association and its 250 affiliates throughout the country are conducting their first nation-wide fund-raising campaign this year. The money raised—the goal is \$5,000,000—will go to improving conditions in mental hospitals, sponsoring new mental health clinics, supporting research and producing materials for mental health education.

This money and these efforts should help to restore some of the millions of mentally sick to health and to prevent mental breakdown in others.

A big part of the preventive work should begin with our children. Parents and other relatives, teachers and the neighbors can all do their share, but first they must learn something of what is needed for a child's mental development to be healthy. On this point Dr. Arnold Gesell of the Gesell Institute for Child Development says:

"Each and every baby has basic traits which declare themselves in patterns of behavior and ways of growth. Every child

must do his own growing but we can do much to guide and to direct that growth. By assisting his growth we make him healthier in mind and happier.

"For this reason mental health begins at home. The whole household helps to give the new life a good start. Fathers are taking a new attitude toward problems of child care and discipline. They want to know what makes a young child 'tick.' They look a little less severely upon the shortcomings and the immaturities of early development. This leads to better understanding, and a greater respect for the dignity of the individual even in the tender years."

Science News Letter, May 9, 1953

## TECHNOLOGY

**Compensation Claims May Run Into Billions**

➤ AMERICAN INDUSTRIAL companies are facing a multi-billion dollar bang made up of compensation claims for hearing loss from noise, Dr. C. Richard Walmer, managing director of the Industrial Hygiene Foundation, Pittsburgh, warned at the Industrial Health Conference in Los Angeles.

He urged industry to meet the threat by better and wider efforts to control noise.

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During the winter of 1952-53, about 34% more *waterfowl* remained in Canada than during the previous winter.