



**ATOMIC MASK**—The U. S. Army's E-13 protective mask, is shown on a testing model at Mine Safety Appliances Company, Pittsburgh, where it was developed. The military mask, constructed all in one piece, has a wide range of vision and will protect against poison gases and against atomic and other harmful particles. The model has electric light "eyes" which are used to cast light patterns on the concave chart in the back-ground, thus enabling engineers to determine the field of vision.

#### SURGERY

### VA Doctor Performs Rare Parathyroid Transplant

► A RARE surgical transplant, in which four parathyroid glands were successfully transferred from a still-born baby to a 36-year-old veteran, has been reported.

The transplant was performed by Dr. George L. Jordan, Jr., chief of surgical service at the Veterans Administration Hospital in Houston, Tex., and assistant professor of surgery at Baylor University Medical School.

Both the thyroid gland and the parathyroids attached to it were transplanted, but only the parathyroid glands survived. If the transplanted glands continue to behave normally, Dr. Jordan said, most of the veteran's troubles may be over.

The veteran's own glands were removed eight years ago because of cancer and, until the transplant, he had been receiving regular doses of synthetic hormones to keep him alive and healthy. However, he apparently developed a reaction to the parathyroid extracts and performing the operation became necessary.

The operation, in which both the thyroid and parathyroid glands are transplanted, had been attempted only three times in the recorded history of surgery. The first attempt was in 1952. All three previous transplants had been made at the Albert Einstein Medical Center in Philadelphia and two of the three have been successful.

Science News Letter, July 6, 1957

#### PUBLIC SAFETY

## Speed Doesn't Always Kill

► LOWERING THE SPEED LIMIT is not the way to eliminate a major portion of the serious and fatal traffic accidents on the nation's highways.

This is the conclusion of John O. Moore of the department of public health and preventive medicine, Cornell University Medical College, New York, based on studies of 3,203 passenger cars involved in injury-producing accidents of all types.

New highways are being built to carry more vehicles farther and faster and yet one constantly hears the cry, "Speed Kills, Slow Down and Live." It is strange that this dilemma exists, because no one has actually proved that speed kills, Mr. Moore reported.

In measuring the effects of speed, he considered only the accidents that produced either dangerous or fatal injury. They represented nine percent of the 7,154 occupants.

The data showed that 74.1% of the 3,203 cars were not traveling any faster than 60 miles per hour before they became involved in the accidents. Even if a speed limit of 49 mph had been strictly enforced, there would still have been 60% of the injuries.

Excessive speed over 60 mph was naturally followed by an increasing rate of dangerous and fatal injuries, but only one-fourth of all the accident-involved cars were traveling that fast.

Speed regulation could make some improvement in this group but it is not the only factor responsible for injury or death, Mr. Moore reported.

Other controlling factors are whether or not the accident victim is ejected from the car, what seat he was sitting in at the time of impact, and what part of the car was struck.

Front doors open in about 50% of all

cars in injury-producing accidents, and the occupants who are thrown out receive five times as many dangerous or fatal injuries as riders who remain in the car.

The data showed that, in general, the entire rear seat is less dangerous than the front seat, with the right front seat having the worst record. But regardless of what seat was occupied, being near the impact site produced the greatest chance for injury.

To reduce the injuries and deaths, both the speed of the car and its design must be taken into consideration, Mr. Moore concluded.

His report was published by the Highway Research Board of the National Academy of Sciences-National Research Council in Washington.

Science News Letter, July 6, 1957

#### ELECTRONICS

### Ships Span Atlantic To Spot Missiles

► SIX MAN-MADE islands will span the Atlantic Ocean to act as the Air Force's eyes and ears in its missile testing program, the Air Research and Development Command revealed.

The "floating" bases will make a 3,000-mile chain stretching between the islands of St. Lucia in the Lesser Antilles and Ascension, below the equator in the mid-Atlantic. The six bases, slow Army freight supply ships, are called "telemetry ships," and will fill in the missile tracking gap that presently exists in ARDC's 5,000-mile missile test range.

The old supply ships have been modified with special electronic equipment to record and transmit data on missiles to Cape Canaveral, Fla.

Science News Letter, July 6, 1957

#### MEDICINE

## Diseases Reclassified

► BLOOD TESTS have shown two long-accepted forms of rheumatoid arthritis are not rheumatoid arthritis at all, but are distinct diseases of their own, Dr. Currier McEwen, New York University Bellevue Medical Center, New York, reported to the Ninth International Congress on Rheumatic Diseases meeting in Toronto, Canada.

The two diseases are spondylitis and arthritis with psoriasis. Both of these have been regarded as forms of rheumatoid arthritis, the first one attacking the spine and the second appearing with a skin ailment.

And another ailment, Still's disease, which for years has been referred to as a variant of rheumatoid arthritis that strikes children, is simply rheumatoid arthritis.

The reclassifications became necessary after the standard sheep cell agglutination tests were performed on patients having the three diseases. In this test, a blood

sample is taken from a suspected rheumatoid arthritic and mixed with specially treated sheep red blood cells. A noticeable reaction takes place if the patient is a true rheumatoid arthritic.

The researchers who developed the test believe the reaction is caused by a special substance which develops in the blood of arthritics.

Used on 131 patients with "classical" rheumatoid arthritis, the test was 98% positive when a highly sensitive method was used. But in more than 100 cases of ankylosing spondylitis, a condition where the whole spinal column becomes enclosed in a bony encasement, only one positive case was turned up with the sheep cell test.

In a group of patients with arthritis and psoriasis, there was not even one case turned up by the test, Dr. McEwen reported.

Science News Letter, July 6, 1957