

convalescent patients, who have more antibodies in their blood, are proving useful.

Immune serum globulin can prevent measles entirely or can modify the attack so that it is only a mild sickness with scarcely any danger of complications. Children under three years, sick children and sick grown-ups who have never had measles if exposed to the disease get a dose big enough to ward off an attack entirely. This spares them the disease which might prove fatal in their state.

The immunity to measles given by this big dose, however, is not lasting. So doctors prefer to give healthy children, when exposed to measles, a dose just big enough to let them have a mild attack. In this way they get a chance to build up in their own bodies the antibodies that will last them the rest of their lives.

The surplus immune serum globulin and that made since the war from surplus dried plasma has been given back free of charge by the Red Cross to the American

people, who gave the blood, for use when and where needed. More than a million doses have been distributed to doctors, hospitals and health departments since 1944, and about 600,000 during the fiscal year 1947-48. The commercial value of this 600,000 doses is nearly \$3,800,000. The patients who got it had to pay only for the services of the doctor or hospital for administering the dose.

The big measles year of 1947-48, used up a lot of the immune serum globulin. In that same year, however, the National Blood Program of the American Red Cross was inaugurated and on Jan. 12, 1948, the first regional center of the program opened in Rochester, N. Y. Aim of this program is to collect, process and distribute enough blood and its health-giving fractions to meet the needs of the entire nation for transfusions, for measles-fighting and for any other use that can be found for blood.

Science News Letter, February 26, 1949

power system. Any arc forming between the interrupted contacts is extinguished by the released high-pressure air.

Science News Letter, February 26, 1949

Words in Science— SILICONES

► A FAMILY of synthetic resins, born of slippery organic compounds wedded to gritty silicon, basic constituent of sand and glass, is known under the name of the silicones. This is pronounced silly-cones.

Many new products are being made from these organic compounds of silicon. Greaseless lubrication good at extremely high or low temperatures; a water-repellent film that can be applied to fabric or paper and that will withstand dry cleaning and washing; better rubber tires; longer-lived electrical insulation. These are some of the major products made possible by silicone chemistry.

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PSYCHIATRY

Shock for Mental Illness

► USING electric shock treatments in a prophylactic way to prevent return attacks of mental illness in patients who have recovered is now being tried by two Canadian psychiatrists, Dr. J. J. Geoghegan of Guelph, Ont., and Dr. G. H. Stevenson of London, Ont.

Good results in the first three years of a five-year test period are reported by the psychiatrists in the AMERICAN JOURNAL OF PSYCHIATRY. (Jan.).

A single electric convulsion is induced about once a month in the patients, starting after recovery from the most recent attack of mental illness. The theory behind the prophylactic convulsions is that electric convulsions often end a manic or a depressive attack of illness. This being the case, the doctors reasoned that an induced convulsion might break up and dissipate accumulating tensions before they reached the point of definite mental illness.

The trial of the method is being made on a group of patients each of whom had two or more attacks of mental illness in the preceding five years. During the three years of prophylactic electric convulsions none of the 13 has had any return of mental illness.

By contrast, every one of a group of 11 similar patients who refused the prophylactic treatment has had one or more attacks of mental illness in the three years.

The method has disadvantages. Many patients dislike the electroshock treatment so much they would rather risk an attack of mental illness than look forward to a long series of electroshock treatments. The treatments themselves are not without danger. There are also economic disadvantages such as time lost from work and

cost of the treatment. These, the psychiatrists feel, are offset by the time lost and expense of repeated attacks of mental illness.

"Nevertheless," they state, "we consider it the duty of the psychiatrist to keep the patient well and to prevent recurrences of mental illness, if possible."

Until some better preventive method is found, they believe prophylactic electroshock should be tried.

Science News Letter, February 26, 1949

ENGINEERING

New Circuit Breaker Makes High Voltage Lines Safe

► COMPRESSED air is used to literally blow out a flaming short-circuit arc on a high-voltage electric power line by a new circuit breaker, the American Institute of Electrical Engineers was told in New York by Benjamin P. Baker and Erling Frisch, Westinghouse engineers.

The new circuit breaker is a safety device, developed for the protection of power systems and for high voltage use in congested metropolitan and residential areas. It is super-safe, they said, because it contains nothing more inflammable than compressed air. It is designed for use in a 69,000-volt system. It was described as the "highest-rated compressed air circuit breaker yet designed for outdoor service in such a system."

This device is capable of stopping an electrical surge of 3,500,000 kilowatts, they said. If a short circuit occurs and a tremendous surge of current travels along the line, the breaker opens the circuit and halts the surge before it can damage the

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