

MEDICINE

AAF Devices Fight Polio

New development is useful only for bulbar infantile paralysis that affects breathing. Only a few such cases usually occur in an epidemic.

► **THE LATEST** development in polio fighting, although apparently life-saving in some cases, will prove disappointing to many anxious parents whose hopes may have been raised by reports of "the greatest single advance in 50 years in the fight against polio."

It does not answer all the problems in polio, according to authorities at the National Foundation for Infantile Paralysis. It is useful only for cases of bulbar infantile paralysis. These are the ones in which the respiratory or breathing center in the brain is affected and they often end fatally. The number of bulbar cases in any epidemic, however, is usually small.

The new development consists in use of Army Air Force equipment developed to protect men against oxygen lack at high altitudes and to give artificial respiration in the cramped space of a plane where ordinary methods were impractical if not impossible.

Although optimistic about the new development in polio fighting, Dr. M. B. Visscher, of the University of Minnesota, where it was first tried, said that he and his group are not yet ready to make any statement about results and have not made any statement. Physicians who are very happy with the results have made some comments.

The National Foundation for Infantile Paralysis authorities stated the new development has been used so far in 20 patients. All but one survived. Four or five would have been expected to die at the usual 20% to 25% fatality rate in bulbar polio. The only death was in a patient whose parents refused permission for the new treatment until too late.

A tiny light that clips on the ear lobe is one of the new weapons being used against polio. This device with filters measures the amount of oxygen circulating in the blood. It was invented for the AAF by Dr. Glenn Millikan of the University of Pennsylvania. With a recording tape it gives a continuous measure of oxygen level in the blood and was used, among other times, to show AAF trainees going through the altitude chambers the need for wearing

oxygen masks at high altitudes. The device is painless and does not require taking even a drop of blood from the patient.

With this device doctors can tell immediately when the patient is even slightly lacking in oxygen, instead of having to wait for clinical symptoms such as cyanosis, or blueness of lips and skin, by which time the patient's oxygen need is very great and his condition poor.

When oxygen is needed, the University of Minnesota doctors make use of another AAF device, kept very "hush-hush" during the war, called the pneumatic balance resuscitator, to supply oxygen at the rate needed.

Earlier than usual use of tracheotomy is said by National Foundation authorities to be another feature of the Minnesota treatment. This operation consists in cutting a hole into the patient's trachea and inserting a tube for breathing. When a patient with bulbar polio loses his swallowing reflex, he is in danger of choking on the mucus accumulating in the larynx above the trachea. The operation removes this danger.

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INVENTION

Fire-Resistant Cloth Is Also Water-Proof

► **FABRIC** that is at once fire-resistant and water-repellent can be made by a process on which U. S. patent 2,406,779 has been granted to John L. Kurlychek of Orange, N. J.

Fire-resistant clothing has long been made of woven asbestos, but most of this is thick, clumsy and not water-proof. Lighter asbestos cloth can be made by mixing about one-fourth cotton into the fiber; but this cotton remains inflammable. Mr. Kurlychek's solution is to impregnate the cotton with a metallic compound that renders it flame-resistant and at the same time makes it able to shed water.

The compounds favored by the in-

ventor are soaps of the heavy metals, for example zinc. These are insoluble chemical relatives of ordinary washing soaps, except that the latter contain lighter metals, usually sodium, and of course are soluble in water. The fabric is first soaked in a chemical solution of the heavy-metal soap, the solvent is wrung out, and the fabric then mildly heated to melt the soap into its fibers. Fabrics thus treated can be repeatedly dry-cleaned without losing their dual resistant properties.

Patent rights are assigned to the United States Rubber Company.

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EDUCATION

Better Science If Teachers Better Paid

► **CHARGING** that there is more financial incentive for a young man to seek to be a milkman or janitor than a high school science teacher, Dr. Paul E. Klopsteg, chairman of the American Institute of Physics, declares that American youth cannot be properly educated for an atomic age until teachers are paid higher salaries.

"Teachers' salaries have advanced little in recent years, while incomes in other occupations have risen by leaps and bounds," he said, adding, "The discrepancy between teachers' salaries and incomes in other occupations is much wider in the United States than in other countries.

"We cannot hope to retain or advance our scientific superiority in the dawning atomic age unless this weakness in our society is overcome," Dr. Klopsteg warned.

He reported surveys showing that the average teacher salary is about \$1,500 a year, and most high school teachers receive less than \$2,000.

"Many milk deliverers receive more than twice as much in wages and commissions," the educator pointed out.

Predicting a critical shortage of both scientists and science teachers for many years, Dr. Klopsteg said that improved high school science training is needed both to interest young people in science and to acquaint all students with science as a basis for good citizenship in the modern world.

Urging higher teaching standards, he concluded, "Better teaching requires higher salaries."

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