



RELIEF—"Iron lungs" rescue polio patients until their own breathing can resume the job. This cheerful trio lives at the Respirator Center at Children's Hospital, Baltimore, established there in cooperation with the National Foundation for Infantile Paralysis.

sometimes constipation, poor appetite, pain particularly in arm and leg muscles. Trembling of the hands and other parts of the body and stiffness of neck and back are other symptoms.

If paralysis or crippling does occur, there are operations that help reduce the disability. Strong muscles can be transplanted to take over the job of weakened ones. Legs can be slowed in their growth or shortened by surgery to match the polio-shortened one when necessary. Exercises, sometimes in pools such as the famous one at Warm Springs, Ga., and in others close to the polio victim's home, help strengthen weakened muscles.

Respirators, or "iron lungs," are better and more numerous than they used to be. For those who cannot live outside a respirator, there are now special centers being developed where the iron lungers can be together, stimulate each other to try longer periods outside the respirator, and get all the expert attention needed from doctors and nurses.

The polio virus has an affinity for nerves. It paralyzes by destroying nerves. Muscles unable to contract and relax because their nerve controls are dead gradually wither and shrink. Recently, scientists have been able to get the polio viruses (there are several strains of polio virus) to grow outside the body in non-nervous tissue. This is expected to help in further studies of the virus and to speed tests of possible anti-polio drugs.

The past two years have been the worst polio years on record in this country. Thousands are still fighting their way back to health and useful activity. But they are getting more and better help than could be given two decades ago, or even 10 or five years ago. Polio may strike again and again in the next few years, but its victims can be sure of getting the best care that the ever-growing science of polio fighting can develop, thanks in large part to those dimes being given all over the nation this month.

Science News Letter, January 20, 1951

AGRICULTURE

Weed Control Method Uses Oil at Night

➤ A NEW way of weed control may develop because a California plant scientist has utilized the scientific fact that the air openings in leaves of crops are closed at night.

Weeds in a field of beans were killed without hurting the bean plants when sprayed at night with a light petroleum oil, in an experiment at the Shell Agricultural Laboratory experimental farm near Modesto, Calif.

Dr. Johannes van Overbeek, Shell plant physiologist, explains that after the sun sets, the leaves of the crop plants close their stomata, which are the openings in their leaves through which oxygen enters and carbon dioxide is expelled in the "breathing"

of the plant. The openings are not entered by water due to surface tension, even when they are open. But kerosene and other petroleum liquids can enter the stomata when they open, damaging the membranes of the plant cells so that the cell contents leak out. When the openings are closed, the oil spray cannot get in.

Grass is a principal weed of cultivated fields. The structure of grass is such that the delicate growing point is easily reached by oil creeping down between the rolled-up leaves of the young plant. Thus, oil at any time, in darkness or light, will enter and damage this tissue, and the night spraying will kill the grass.

A volatile oil is used in the spraying so that it has evaporated by the time daylight comes and the leaves of the beans or other crop plant get open for their daily business of growing.

The new spray is still merely experimental. Two difficulties stand in the way of a practical application: night work is involved, and the oil used is inflammable and constitutes a hazard.

Science News Letter, January 20, 1951

Missouri is the leading state in producing walnut timber.

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