

service-testing by the Army unit which will use the machinery.

Part of the second step, and all of the third are accomplished at testing grounds in Fort Churchill, Canada, and in Arizona, where the Army Engineers maintain establishments.

Americans are counting on their technical superiority to maintain a lead over the greater manpower of the Communist nations. For this to count, our technology must be effective all over the world, in all kinds of weather. The Army Engineers' Climatic Research and Test Laboratory is designed to make sure that this happens.

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## CHEMISTRY

## Hit DDT Resistant Flies

► A SWISS discovery of a new insecticide that knocks down and kills flies that are resistant to DDT was announced to the World Chemical Congress in New York. Growing resistance of flies to DDT has limited its effectiveness in the last year or so.

It is called Pyrolan and the claim is that it is not dangerous to man and other warm-blooded animals as its toxicity corresponds approximately to that of rotenone. This promises to allow its use where DDT can not now be used.

Already in Switzerland and Sardinia tests, the new insecticide has freed for several weeks rooms of flies that are not affected by DDT. Moreover, the house fly does not seem to develop a resistance to Pyrolan.

Dr. Robert Wiesmann of the J. R. Geigy Co. of Basle, Switzerland, presented the paper to the congress, but Dr. H. Gysin synthesized the new chemical which has

## ENGINEERING

## Water Tunnel Carries Cable

► WATER and electric power are both being carried through a tunnel under the Continental Divide in Colorado, the tunnel being built to provide irrigation water to farmlands on the eastern slope of the Rockies.

The tunnel, recently constructed, is 13 miles in length and is known as the Alva B. Adams water tunnel. It brings water from the western slope of the Divide to the eastern slope. At the time of its construction no thought was given to its use to carry electric cables. This idea developed when plans were made to transmit electric power from the Granby Pumping Plant on the west side to the Estes Power Plant on the east.

This unique underground installation of an electric cable was described to the American Institute of Electrical Engineers meeting in Portland, Ore., by F. M. Wilson and R. A. Nelson of the U. S. Bureau of

## INVENTION

## Patent Electrically Heated Clothes Drier for Home

► QUICK DRYING of clothes in the home is promised with an electrically heated clothes drier which brought patent 2,567,434 to Alice P. Hoskings of San Diego, Calif. It resembles the familiar rack now widely used which has two side pieces, and cross pieces on which the garments are hung. In this, the crossarms are hollow and have heating elements inside them. The household current provides the energy.

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the complex structure of 1-phenyl-3-methyl-pyrazolyl-(5)-dimethylcarbamate.

The new insecticide has the advantage of not affecting moths, butterflies, roaches and beetles. Insects taking up food by sucking may be killed by small doses.

The quick action of Pyrolan is one of its most useful properties and in this respect it will compete with rotenone, a natural product, used in fly sprays for quick knock down of the insects.

Du Pont also gave details of an insecticide with a wide range of insecticidal action. It is known as EPN, and chemically it is ethyl p-nitrophenyl thionobenzene-phosphonate.

It has been in use since the spring of 1950 when it was used to control mites in the Pacific Northwest. It is effective against orchard pests and European corn borers, Dr. S. S. Sharp of Du Pont reported.

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Reclamation. The tunnel was used to avoid the difficulties of erection and maintenance of transmission lines if built over the top of the Divide through the 11,850-foot Buchanan Pass.

The principal part of the electrical installation was made during the winter months of 1949-50 when the tunnel could be drained of water. The circuit consists of three single-conductor cables housed in a steel cable which is filled with nitrogen at an average pressure of 200 pounds per square inch. The cable is hung from the roof of the tunnel, suspended by 71 anchors of corrosion-resistant stainless steel.

Provision was made in the design to use the cable circuit for carrier current communications, the engineers were told. The initial installation will include two communication channels over the Phase A conductor. One future channel over the Phase C conductor is planned.

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