

by German chemists at the I. G. Farbenindustrie plant at Elberfeld and had been patented. This was not known to American scientists at the time they started their search for new antimalarial drugs when the war cut off the supply of quinine from the Dutch East Indies.

The Germans, however, discarded the chemical as no good, while American scientists, once they tested it, recognized its value. The German method of synthesis, moreover, was too complicated to be practical for commercial production of

the chemical. This bottle-neck was overcome by Prof. Charles C. Price and Dr. Royston M. Roberts, of the University of Illinois, who developed an original and simple method of synthesis.

Clinical tests of the drug's value were made with the 20 pounds of it which chemists at the University of Illinois worked 24 hours a day, in three shifts, for three weeks to produce. This laboratory-made product was enough for 30,000 doses.

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sulfone in a way they hoped would make it more effective in penetrating the waxy outer covering of moth cocoons. The result was DDT. Since tuberculosis germs, though very different from moths, also have a waxy outer covering, Dr. Burger and Dr. Graef thought it worth trying to make a chemical with something of DDT's wax-penetrating power. So they also started with a sulfone, choosing the one that is the parent chemical of promin.

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Magnesium alloy its to be used in *lawn-mowers*, it is reported; it will make the mechanism lighter but will not decrease the number of cuttings in a season.

ENGINEERING

Better Television Images

Reproduction from negative films with rising shoulder characteristics may produce superior pictures, actual tests have confirmed.

► TELEVISION reproduction from negative films may provide superior television images, Emery Meschter of the du Pont Company told the Society of Motion Picture Engineers in New York.

Features of performance in television to be expected from both negatives and prints as image sources, he said, are predicted from average characteristics of elements of the television system. He described a dynamic test procedure for the investigation of the over-all reproduction curve involving film and television.

Actual tests, he asserted, confirm the theoretical prediction that a negative film with a rising shoulder characteristic may provide superior television images.

The system of color television developed by the Columbia Broadcasting System was described at the same meeting by Bernard Erde of that company. These color television pictures had their origin in color film and color slides, he stated.

He described in particular the film scanning mechanism and associated optical, electrical, and mechanical equipment constituting the color film and slide pickup portion of the system. He emphasized the various interdependent functions of constant film drive, optical and electronic film motion compensation, heat and color filtering, and film and color phasing.

Calibration of Lens

An absolute and physically sound method for the photometric calibration of lens apertures was described by Allen E. Murray of Bausch and Lomb Optical Company. It was developed in the Scien-

tific Bureau of that company.

Essentially, he said, the method consists in comparing the total flux from a depolished opal glass aperture with the flux through a given lens at a definite stop opening when focussed on the opal glass aperture. An integrating sphere is used to collect the flux in the two cases and readings are made proportional to the flux with two matched barrier photocells.

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MEDICINE

Search for TB Cure Turns To Chemical Cousin of DDT

► THE SEARCH for a chemical cure for tuberculosis has turned to a compound that is a sort of cousin of DDT, Dr. Albert Burger and Dr. Edith Graef, of the University of Virginia, told members of the Virginia Academy of Science meeting at Richmond.

The latest compound they have made is related not only to DDT but to promin, a chemical hailed a few years ago as a possible remedy for tuberculosis. Unlike promin, the new compound contains no sulfur.

It stops tuberculosis germs in the test tube, but, as Dr. Burger pointed out, a great many other chemicals do that. How effective it may be against the germs in the human body is not yet known. Next step, he said, will be to try it on guinea pigs and if it continues to show promise, trials in humans will be considered.

The lead for the present compound came from the Swiss experimenters who, searching for a better moth-proofing chemical, changed the structure of a

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