

## PSYCHOLOGY

**Experts Will Give Advice  
On Employing Veterans**

► EMPLOYERS who want to give jobs to men returning from the armed forces with physical disabilities will be able to obtain the advice of experts on how to place these men so that they will not be handicapped. The formation of a panel of authorities to furnish practical data to industry was announced by the Industrial Hygiene Foundation of Pittsburgh.

The panel is prepared to function until the job of rehabilitation is done, and employers are encouraged to send in questions to be answered by the five experts on the panel.

Members of the panel are: Dr. C. D. Selby, medical consultant, General Motors Corporation, Detroit; Col. John H. Andrews, executive officer, Re-employment Division, National Selective Service System, Washington; Dr. Harley L. Krieger, medical director, Ford Motor Company, Detroit; A. A. Hendrix, personnel director, Eastern Aircraft Division, General Motors Corporation, Linden, N. J., and I. Dent Jenkins, personnel manager, Harrison Radiator Division, General Motors Corporation, Lockport, N. Y.

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## PSYCHIATRY

**Reasons Why Mentally-Ill  
Should Go to Hospital**

► EVEN if a doctor advises it, the relatives of a mentally sick person are usually very reluctant to take the patient to a hospital for mental sickness. They forget that these institutions are hospitals, places where sick people go to be taken care of and helped to get well. Five good reasons why the mentally sick person may be better off in a hospital than at home are given by Edith M. Stern in her book, *Mental Illness: A Guide for the Family*. (Commonwealth Fund, \$1.) Much other helpful information is given in this same book.

First, the author points out, conditions at home often cause or aggravate mental illness. The devotion and solicitude shown by members of the family may be too great, or there may be more friction than the patient can stand. In the hospital he gets an "emotional breathing spell."

Second, the hospital has all the facilities and the trained staff needed to help the patient recover.

Third, besides giving the patient an emotional breathing spell, the hospital also provides a place where the patient under emotional strain may "blow off freely," without disturbing relatives or neighbors and without having to put up later with their irritation or scorn or other feelings about the outburst.

Fourth, the patient benefits through group suggestion. The untidy patient seeing others keeping themselves and their belongings clean and in order is likely to fall in line and do the same, although he is apparently immune to nagging and scolding about such things at home. A restless patient who sees everyone else going to bed at a certain hour goes to bed himself. He sees the others sitting down to eat at regular meal times, so he does the same.

Fifth and very important reason for taking mentally sick patients to mental hospitals is for their own safety. Mentally sick persons may seriously injure themselves or commit suicide. No untrained person, however devoted and watchful can possibly foresee and forestall all such attempts.

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## ENGINEERING

**Streamlined Trains  
For Interurban Traffic**

► COMMUTERS in the post-war period are promised trimmer trains to ride on, by a design on which U. S. patent 2,342,724 has just been issued, to A. H. Candee of Pittsburgh. More space for passengers, better distribution of weight and more flexible control are among the advantages claimed.

Each unit comes in three articulated sections, with a four-wheeled truck under each section. Passenger space is located in the end thirds, together with an operator's compartment at either end. The center section is occupied by the power unit, consisting of an internal combustion engine direct-connected to an electric generator. The passenger sections are connected by a corridor running along one side of the power compartment. One special advantage of the new unit lies in the detachability of the power unit. Engine, generator and control panel can be lifted together out of the center section and a spare power package inserted, thus enabling the car to remain in service during repairs or overhaul of the power machinery.

Rights in the patent are assigned to the Westinghouse Electric & Manufacturing Company.

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## RADIO

**Television Theaters  
After War Predicted**

► OPENING of several hundred television theaters in the first ten years after the war was predicted by Ralph R. Beal of the Radio Corporation of America, speaking at a meeting of the San Francisco Engineering Council. Television images of events as they occur will be shown on screens up to some 15 by 20 feet. The theaters will be connected into national television networks, he said.

Home television sets, until now confined to 9 by 12 inch screens, will produce much larger and brighter pictures after the war, he declared. Pictures up to 18 by 24 inches have been successfully produced experimentally.

Television broadcasting will use automatic, unattended radio relay stations spaced at intervals across the country. These radio towers, Mr. Beal explained, may be supplemented by specially designed wire circuits or coaxial cable. Television developments will reach enormous proportions when war uses are no longer first consideration.

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## CHEMISTRY

**Benzene Can Provide  
New Source for TNT Base**

► A NEW SOURCE for toluene, raw material for TNT, is provided by a process on which patent No. 2,338,973 was issued to Dr. Louis Schmerling of Chicago. Initial material is benzene, produced in quantities both in distillation of coal to make coke and in petroleum refining. This is chemically "doubled up" to form a compound known as dibenzyl.

In Dr. Schmerling's process, dibenzyl and hydrogen are heated together under pressure and in the presence of a catalyst. A high percentage of the raw materials are converted into toluene. A co-product is styrene, which is an ingredient of the principal kind of synthetic rubber now being manufactured in this country.

Rights in the patent are assigned to Universal Oil Products Company.

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# CE FIELDS

## PHYSICS

## Faint Rose Color in Sky Is Warning to Rangers

► FAINT PINK or rose color in the sky is a warning to tower men and rangers on the lookout for forest fires. It is a common practice for them to glance sunward frequently during the fire season in search of this faint coloring as it is often caused by small quantities of dissipating smoke and thus indicates fire in the not distant vicinity, or at least to windward.

In cases of severe forest fires this phenomenon is noticeable sometimes several hundred miles from the exact location of the fire. The color becomes somewhat browner as the smoke becomes denser, or the fire approaches nearer, Leavitt Baker, Jr., of San Anselmo, Calif., points out.

It is sometimes difficult to determine the difference between smoke and haze until the brownish color appears. This delicate coloring is frequently caused by industrial smoke or dust storms as well as by fire. (See SNL, Jan. 1)

*Science News Letter, March 11, 1944*

## MEDICINE

## Two More Infections Yield to Penicillin

► LATEST serious illness to yield to penicillin treatment is secondarily infected amebic abscess of the liver. Recovery of the patient after penicillin had been injected into the abscess is reported by Dr. Paul H. Noth and Dr. John Winslow Hirshfeld of Wayne University College of Medicine, Detroit, in the *Journal of the American Medical Association*. (March 4)

This issue of the medical journal might be called the penicillin number, since the bulk of the reports are on this subject.

Cures of usually fatal brain infections in three patients treated with penicillin at Lawson General Hospital are reported by Capt. Albert L. Evans, M.C., A.U.S. Staphylococcus germs were responsible for the meningitis in two cases and pneumonia germs in the third.

Need for more knowledge of how the mold chemical achieves its cures and of the best methods and doses for use in treating patients is stressed in reports by

Dr. Martin Henry Dawson and Dr. Gladys L. Hobby, of New York; Dr. Wallace E. Herrell of the Mayo Clinic; Dr. Arthur L. Bloomfield, Dr. Lowell A. Rantz and Dr. William M. M. Kirby, of San Francisco; Dr. Rene J. Dubos, of Boston; and in discussion of these reports by Dr. Chester S. Keefer, of Boston, and Dr. Walter S. Priest, of Chicago.

"The most urgent problem," Dr. Dubos states and Dr. Keefer reiterates, "is not the discovery of more and more anti-septics, but the definition of that property or more likely combination of properties which determine whether a certain agent will retain its antimicrobial activity in the presence of animal tissues without injury to the latter."

More complete understanding of this problem, it is pointed out, will not only help in the search for new chemical remedies like penicillin, gramicidin and the sulfa drugs, but also in the rational use of those already available.

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## MEDICINE

## Tropical Medicine Expert Gets Medal of Palladium

► A MEDAL of palladium, rarer metal than platinum or gold but not a war emergency material, was presented in New York to Col. Richard Pearson Strong, director of tropical medicine at the Army Medical School, Washington.

The medal, for distinguished service in tropical medicine, with an honorarium of \$500, was awarded by the American Foundation for Tropical Medicine. Known as the Richard Pearson Strong medal, it was awarded for the first time and will be awarded periodically hereafter. It was established as a result of a gift to the Foundation from the Winthrop Chemical Company.

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## PHYSICS

## Supervoltage X-Ray Tube Produces "Hard" Rays

► A SUPERVOLTAGE X-ray tube, designed to produce very "hard" rays of short wavelength has been given patent 2,342,789, obtained by Benedict Cassen of Pittsburgh. One feature claimed by the inventor is the freedom from necessity for high-voltage insulating and protective equipment, which make many super-X-ray machines so cumbersome.

Rights in the patent are assigned to the Westinghouse Electric & Manufacturing Company.

*Science News Letter, March 11, 1944*

## PSYCHIATRY

## "Neurotic" Cats Serve As Guinea Pigs In Test

► CATS made "neurotic" by inner conflict between hunger and fear served as guinea pigs in experiments designed to investigate possible reasons for the use of morphine by human addicts, many of whom suffer from psychoneuroses.

The experiments were conducted by Dr. A. Wikler of the U. S. Public Health Service Hospital at Lexington, Ky., and Dr. J. H. Masserman of the University of Chicago. (*Archives of Neurology and Psychiatry*) Doses of about one milligram per kilogram of body weight were found to be effective.

In all the animals, the drug affected strongly the patterns of behavior which had previously been learned by the cats. The more recently learned patterns disappeared first and reappeared last as the effects of the drug wore off.

This is interesting because it might indicate that this drug is capable of breaking up recently acquired "abnormal" ways of behaving while not disturbing (or disturbing less) the older, more "normal" ways of life.

In three out of the five cats treated, the "neurotic" behavior was back again in full force when the morphine had entirely worn off.

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## CHEMISTRY

## New Packaging Material Has Plastic Resin Base

► A NEW plastic packaging material, suitable for moisture-proofing war equipment, food and other articles, has been developed in the laboratories of the Goodyear Tire and Rubber Company and is now being made on a limited scale in a pilot plant. It has been named V-Film and will replace in part an older material known as Pliofilm which requires some natural rubber. The entire supply of Pliofilm is now used for protecting warplane engines in transit.

The new material uses a base of plastic resin. It is made with a derivative of polyvinyl chloride. It is not a substitute for the older material which is made with a rubber hydrochloride base, but is a supplementary material suitable not only for packaging but for fabrication into materials for raincoats, shower curtains, umbrellas and other articles where stitching and sewing are required.

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