

## Do You Know?

All of the well-known British fighting planes contain North American wood.

United States railroads rolled up about 85,000,000,000 passenger-miles in 1943.

The dried toothed tongue of the upper Amazon paiche, a large fish, is used as a grater in preparing foods.

California in 1942 had its largest mineral production since 1929; in value petroleum ranked first, cement second, gold third.

Cattail floss has many of the qualities of kapok and is useful in life belts and floats, heat and sound insulators, and as filling for cushions.

A pastry flour now used in Switzerland contains 50% dried fruit, the rest being wheat flour, fruit and other sugars, nuts and skim milk.

Nail-making in colonial days was largely a home industry; farmers and families hammered out nails as a profitable way to spend long winter evenings.

Iron and copper, which build up the hemoglobin content of the blood and prevent or remedy nutritional anemia, are easily obtained from eating most fish.

Common milkweed plants, long regarded as a farm weed pest, are now furnishing floss for lifebelts, marine mattresses, and for heat and sound insulation.

The President of Brazil recently presented the United States armed forces with 400,000 bags of coffee valued at \$5,000,000 as a gift from the people of Brazil, a token of good-will.

Coal supplies 55% of all United States mechanical energy, powers 95% of railroad locomotives, generates 55% of the electricity, heats four out of every seven homes, and is essential in the making of all steel.

The artificial drying of grass by electricity, instead of by usual hay curing methods, is said to be a growing practice; the grass is cut earlier than when cut for hay because then the proteins and other nutritive values are higher.

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of themselves, how to make a living, how to write letters by using touch type-writing, how to sign their names to checks and letters.

Fortunately a number of the soldiers coming to the vision center for training want to work on a farm when they leave the Army. It is easy, officials have found, to train sightless men to take care of a farm. And chicken raising is the easiest job to teach a blind man to do. They are not taught the traditional jobs for the blind such as chair caning. They learn to make their way in the regular workaday world.

Any deaf or blind soldier may go to one of these special centers. Those becoming deaf or blind in the United States may be sent by any of the general hospitals to one of the centers.

Any soldier who is deafened or blinded may request physicians at his hos-

pital to send him to the special center. He doesn't have to wait for his other wounds to heal; those can receive expert care at the center, too. If he needs a hearing aid, the physicians at the hospital are required to comply with such a request. Or the soldier may write to the Surgeon General's office in Washington, D. C., and officials there will help him to get to the center for treatment and training.

So far, officials do not know how great the proportion of hearing and vision injuries will be. It is undoubtedly true that block buster bombs, dive bombers and all the other noise makers of this war are increasing the number of hearing injuries. Blindness cases are also increasing. But how this number compares with all the other types of injury encountered in combat is not yet known. The ratio does not seem to be at all alarming, but it is large enough to warrant this special care.

Science News Letter, February 12, 1944

### MEDICINE

## Penicillin Saves Life

Little girl dying from gas gangrene, which persisted even after broken arm was amputated, has remarkable recovery after mold-chemical treatment.

► THE MIRACULOUS recovery, thanks to penicillin, of a seven-year-old girl who was dying of gas gangrene is reported by Dr. W. B. McKnight, Dr. Richard D. Loewenberg and Dr. Virginia L. Wright, of Portola, Calif. (*Journal, American Medical Association*, Feb. 5)

Far from the battle fronts, where gas gangrene is an expected if dreaded complication of wounds, on the porch of her home in the High Sierra region of California, this little American girl was found lying with a broken left forearm. How the accident occurred is not known. She was taken immediately to a hospital where, in spite of treatment with sulfathiazole and injections of tetanus antitoxin, gas gangrene developed and her arm had to be amputated. Even then the gangrene continued to threaten her life.

"As a last resort penicillin was given after all hope had been abandoned for a recovery, which came like a miracle," her physicians report.

The penicillin in sufficient quantities to treat the patient successfully was obtained from Dr. Chester Keefer, in charge

of penicillin investigations for the National Research Council and the Office of Scientific Research and Development, who recommended that it be provided from a supply assigned to be used in clinical investigation.

At the time the little girl was treated, no trials of penicillin in human cases of gas gangrene had been reported, though laboratory tests had shown it extremely potent against this infection. Recent reports via England of experiences on the North African and Sicilian fronts indicated that it was successfully used on wounded men with gas gangrene.

The condition is comparatively rare in civilian life. Only one other case, a fatal railroad injury, has occurred in the High Sierra region in the last 10 years.

Science News Letter, February 12, 1944

### INVENTION

## Infra-Red Rays Bake Bread Better and Faster

► BETTER loaves in less time is the claim advanced on behalf of a novel bread-baking machine that uses infra-

red rays instead of the ages-honored oven heat. U. S. patent 2,340,354 has just been granted on this device, to Franklin H. Wells of Hackensack, N. J.

Individual pans containing the dough are slowly carried on an endless chain past batteries of adjustable reflector-equipped lamps of the type already in common use in paint-drying and enamel-baking machines. Since infra-red rays are more penetrating than ordinary heat, baking begins in the heart of the loaf practically as quickly as it does on the surface, and the process proceeds more evenly throughout. Savings of from 20% to 30% over customary baking times are claimed by the inventor. Smoother crust is another advantageous feature, he states.

Rights in the patent have been assigned to the American Machine and Foundry Company.

*Science News Letter, February 12, 1944*

#### MILITARY SCIENCE

## Mountain Fighting Calls Hooves Back to Service

### See Front Cover

➤ WARFARE of the future will be entirely mechanized, all experts prophesied in the mid-thirties. Everything was to move on wheels or tractor treads; gone forever were the picturesque army mule and the dashing cavalry horse.

But when the imagined future became the grim and stony present, military men began to discover that hooves could still go where not even a jeep could quite make it. In the rugged terrains of Tunisia, Sicily, South Italy, it was found necessary to improvise cavalry for a good deal of patrol work, and to purchase pack animals for getting heavy weapons, ammunition and supplies up to the otherwise inaccessible fighting fronts. Fortunately for us, Sicily has long been one of Europe's chief mule-breeding centers, so that a fairly good supply of animals could be purchased.

The front cover picture of this SCIENCE NEWS LETTER was taken by an Army Signal Corps photographer "somewhere in Italy." The mule in the foreground is carrying one of the most formidable weapons of the "front-line artillery," an 81-millimeter mortar. Evidently mules are mules in any language, to judge from the amount of persuasion it takes to keep these newly acquired allies of ours moving.

*Science News Letter, February 12, 1944*

#### MEDICINE

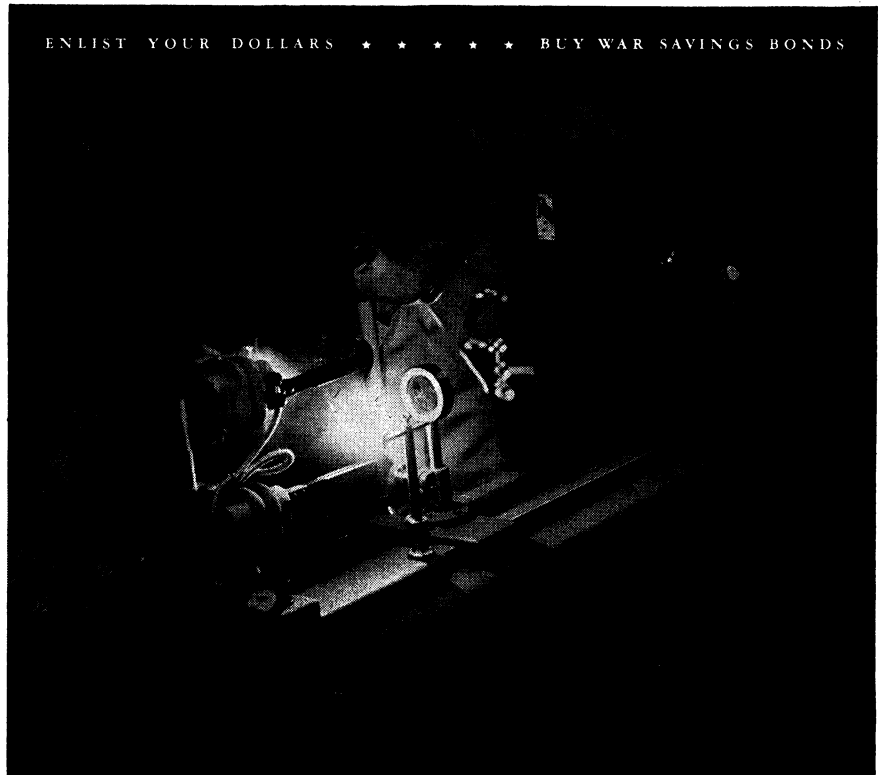
## Speedy TB Diagnosis

➤ SPEEDY diagnosis of tuberculosis, within 12 to 24 hours, is possible with a new tuberculin test developed by Dr. H. J. Corper, head of the research department of the National Jewish Hospital in Denver, an announcement from the hospital states.

Use of a transparent adhesive for applying the tuberculin to the skin makes it possible for the physician to watch the

reaction. This transparent adhesive also eliminates the danger of apparent "positive" reactions due to sensitivity to adhesive rather than to tuberculin.

The tuberculin used in the test is described as a pure simple tuberculin called "autolytic." It is uncontaminated by the medium on which the tubercle bacilli are grown and in which all live bacilli are killed by toluene and removed.



## The Spark that Lights the Flame of Victory



A pinpoint of fighting metal placed in the arc of the spectrograph writes its own signature on a photographic plate. Inside the instrument, the light from that flame is broken up by a prism as a prism breaks up sunlight. Each element identifies itself by a series of characteristic lines, always the same for the same basic element. It reveals to the spectrographer each constituent, what impurities are present and in what quantities.

Thus spectrography helps in control and inspection. It keeps tough fighting steels tough, helps in development of new fighting metals. Spectrography is used, too, in other fields to speed research and

analysis... chemicals, foodstuffs, vitamins.

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