

ment, and the researches in the Westinghouse laboratories have been carried out by arrangement with them. I. M. Mouromtseff and G. M. Dinnick, as well as other Westinghouse engineers, have been working on the problem, and have produced it as a much smaller and simpler tube which is now air cooled.

Heart of the device is two small doughnut-shaped copper tanks, called "rhumbatrons" because of the rhythmic surging of the radio waves within their walls. These were devised by William W. Hansen, Stanford University physicist, who discovered their properties in the course of atom-smashing experiments. The rhumbatrons break up an

electron stream, bunching the individual electrons and converting their energy into the high-frequency oscillations, which are transmitted from the Klystron antenna. Even in this stage of development, the professors were told, a power of 200 to 500 watts is attained, comparable to many a radio station.

Though power transmission may come eventually with the Klystron, engineers think that more immediate applications will be in increasing the number of television transmission channels, or the number of messages transmitted simultaneously over a telephone line; producing body heat internally for medical purposes and in improved aerial navigation.

Science News Letter, November 2, 1940

"It will take additional time," Dr. Horton stated, "to evaluate this particular phase of histamine therapy.

"The perfect treatment for Ménière's disease has not been announced nor will it be announced here tonight," he declared at the beginning of his report. "The story which I have to relate regarding its treatment with histamine is a very simple one and can best be told as it actually happened. I am not here to defend this method of treatment. It will survive or fall on its own merits."

Science News Letter, November 2, 1940

Urges Sympathy for Draftees

DO NOT follow the hard-boiled drill sergeant's methods of handling recruits and draftees. Be firm but kind and show a little sympathy to the new soldier.

This is the advice Brigadier General Raymond F. Metcalfe, Medical Department, U. S. Army, gave to members of the American College of Surgeons, many of whom will soon be medical officers assigned to duty with America's new defense army.

"Remember, the medical officer and the chaplain are the only officers who can show a little sympathy for the new soldier without lowering discipline," General Metcalfe stated.

Many of the men coming to the doctor's office at the dispensary or hospital will be not seriously ill, but tired, homesick and suffering disturbed body functions as a result of the complete change in habits required by Army life.

If there is any doubt of illness, the man should be sent to quarters or the hospital at once rather than waiting until he becomes seriously ill, General Metcalfe said, warning that measles may be the first serious condition developing among the recruits and draftees, and may be followed by pneumonia and empyema. Prompt isolation of the measles patient may stop this disabling sequence.

Sodium amytal, familiar to many civilians as a sleeping medicine, should be given to every seriously wounded soldier picked up by Battalion Surgeons and hospital corps men before the wounded man is sent to the rear, General Metcalfe advised in outlining plans for handling the wounded if we should get into war.

Many lives may be saved by this measure, he said, because sodium amytal has been found to delay for 10 hours or longer the onset of shock which is a grave danger in battle wounds.

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MEDICINE

Nerve-Cutting Operation Cures Meniere's Disease

Record of 400 Permanent Cures and Only One Death Out of 401 Cases Reported to College of Surgeons

A RECORD of 401 operations for Ménière's disease, with one death and 400 permanent cures, was announced by Dr. Walter E. Dandy, of Johns Hopkins Hospital, at the meeting of the American College of Surgeons in Chicago.

Patients with this ailment have sudden, recurrent and usually incapacitating attacks of dizziness in which objects rotate. Ringing in the ear and partial deafness on the affected side and frequently nausea and vomiting accompany these attacks. The deafness and ear symptoms may occur on both sides.

Permanent cure of the condition is achieved, with almost no risk and no after effects, by cutting the nerve of hearing on the affected side, or on both sides, if the ear symptoms occur on both sides. If the hearing is worth saving, it may be preserved by cutting only three-quarters of the way through the nerve. The operation can be done almost painlessly under a local anesthetic, but Dr. Dandy prefers to put the patient to sleep with avertin.

Science News Letter, November 2, 1940

New Chemical Treatment

A NEW chemical treatment of Ménière's disease, which has been on trial for just over a year, was reported

by Dr. Bayard T. Horton, of Mayo Clinic. This treatment consists of injections of histamine and its usefulness in relieving Ménière's disease was discovered when Dr. Horton used it to treat a patient who had peculiar, one-sided headaches. The histamine treatment was given for the headaches, but to the patient's elation, she not only got over her headaches but seemed to be entirely relieved of Ménière's disease from which she had also suffered for more than four years.

Following this experience, Dr. Horton started treating other Ménière's disease sufferers with histamine. To date, 49 patients have been given this treatment. All of them were promptly relieved of the dizziness, nausea and vomiting, and less than half obtained improvement of the ringing in the ear. This is the most difficult phase of Ménière's disease to treat, Dr. Horton pointed out.

The acute symptoms of the disease, Dr. Horton and associates are convinced, can be relieved by injecting histamine into the patient's veins from one to four times on successive days. For prevention of future attacks, histamine in adequate dosage is injected under the skin two to three times a week. A few patients who have been on this schedule for a period of six to nine months have remained free from attacks.

Delay Sewing War Wounds

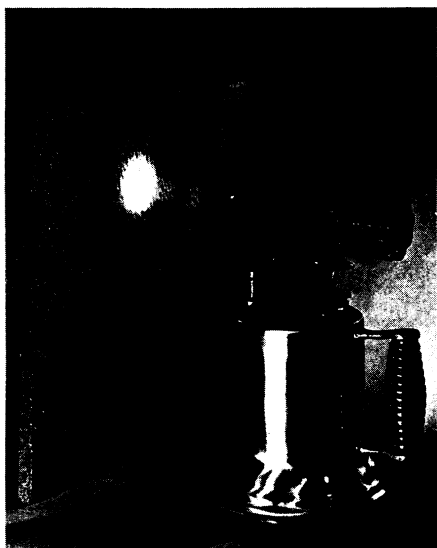
WAR WOUNDS in which the skin and tissues are badly torn should not be immediately sewed up, Dr. Frederic W. Bancroft, of Columbia University College of Physicians and Surgeons, warned fellow surgeons.

French army surgeons after experience in the present war all warn of the dangers of primary suture—that is, sewing up the wound the first time the surgeon sees it—in war wounds.

The ideal conditions of a healthy patient, clean skin, wound made by a relatively sharp and clean instrument, repair of the wound within six hours after it was inflicted, and opportunity for the surgeon to use meticulous care in treating the wound and to watch it during the time it is healing, are hardly likely to be found in war surgery. But unless these conditions are present, Dr. Bancroft advises against primary suture of wounds.

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There are 18,000 kinds of jobs, but only one young person in four leaving school or college is properly prepared for work or has any clear idea of what job he should seek, says the American Youth Commission of the American Council on Education.



WON'T BURN

Non-inflammable lath board is now on the market. (Fir-Tex Insulating Board Co.) It is made of minute flakes of a non-metallic mineral which originates in mica. These are interlaced with wood fibers so that there are millions of microscopic fire-walls in each panel. A partition so constructed was tested and prevented the spread of fire from one room to another for more than an hour.

NUTRITION

U. S. Army May Eat Bread Enriched With Morale Vitamin

American Soldiers Will Continue To Be Best Fed Fighting Men; Study Enrichment of Several Foods

FEEDING soldiers of the U. S. Army bread fortified by the morale-building B vitamins, which would make them better fighters, is being considered by the Quartermaster Corps.

"American soldiers are, and will continue to be, the best fed fighting men on earth," Major Paul Logan, food expert of the Army Industrial College, assured the American Dietetic Association, meeting in New York.

Plans and experiments under way, he said, are aimed toward assuring a balanced diet to American soldiers, in peace or fighting conditions. Strain on body and nerves which modern warfare causes with its lightning speed, whirlwind devastation, and nerve-shattering machines, Major Logan said, means that an army must be fed not only enough food but all the constituents of a properly balanced diet.

"Considerable attention is now being given," he stated, "to the possibilities of enriching certain foods—such as cereals—with vitamins, particularly those of the B complex, and also with certain minerals."

Dehydrated foods are also undergoing tests. These require little space and therefore would help the Quartermaster Corps in its continual battle to ship as much food in as little space as possible.

Soldiers recently ate, and praised, a test dinner prepared entirely from dehydrated foods except for the meat and gravy, Major Logan reported. The menu, he said, included cream of tomato soup, roast beef with brown gravy, mashed potatoes, creamed carrots, cole slaw, cranberry jelly, apple and pumpkin pie.

A pound of cranberry flakes "gross weight," expands to serve 109 soldiers, whereas a pound of canned cranberry jelly represents only six and one-half servings.

While food value of the dehydrated preparations is apparently equal to that of canned foods, the army food specialist said that tests are now being conducted by the Nutrition Committee of the National Research Council to obtain accurate information as to the vitamin and

mineral values which the dried foods contain.

This nutrition committee, headed by Dr. Russell Wilder, is studying problems of vitamins and mineral sufficiency in the military diet in collaboration with the Surgeon General and the Quartermaster Corps of the Army.

Science News Letter, November 2, 1940

Americans Lack Vitamin B

THE AVERAGE American consumes too little vitamin B for grade A health, Dr. Norman Jolliffe, of the New York University College of Medicine, warned dietitians.

This vitamin, which has proved so complicated that it is now technically called the vitamin B complex, is known to contain at least 12 fractions, Dr. Jolliffe pointed out, addressing the American Dietetic Association. Five of the fractions are available in crystalline form for clinical use.

Lack of this vitamin, which occurs in such foods as milk and eggs, whole grains, liver, and some other meats and fresh vegetables, is held responsible for a variety of ills, including some cases of neurasthenia, pellagra, an eye malady, and a nervous disease which until recently was 100% fatal.

Dr. Jolliffe advised nutritionists to look out for vitamin B deficiency in diet of the following:

1. Low income and poverty stricken groups.
2. Persons with bad dietary habits and food idiosyncrasies.
3. Alcoholic addicts.
4. Patients with diseases which alter the requirements of this vitamin.

Vigorous use of nicotinic acid, one factor in vitamin B, has spectacularly reduced mortality from 100% to 15% in the nervous disease known as encephalopathy, which is now known to be caused by acute lack of this food factor.

While not all neurasthenia is caused by too little thiamin—another fraction of vitamin B—in diet, Dr. Jolliffe stated that lack of this vitamin plays a larger