

refraining from excessive smoking, laboratory tests indicated.

An anti-enzyme substance in beef sweetbreads and soybeans may be a new weapon for fighting certain streptococcal infections, it was reported.

Blood clotting was found to involve changes in molecular shape of the same kind as occur in the contraction of muscle tissues and the elastic stretching of skin and hair.

Streptothricin, germ-killer from a microbe that lives in the soil, promised to become a weapon against dysentery and infected wounds.

Refrigeration of the jaw showed promising results as a pain-killing aid to dentistry with complete loss of sensation obtained in the majority of cases tried.

Successful experiments on high blood pressure in rats pointed toward trials of vitamin K as a high blood pressure remedy.

Finding that there are certain changes in the excretion of hormones following injury suggested new methods of treating the burned and wounded.

The discovery of the presence of certain catalysts known as porphyrins, revealed by the fluorescent glow of white matter in the brain, gave light on the problem of mental disease.

Biotin may have a part in the utilization of starches and sugars by humans, tests of liver slices kept alive outside the body indicated.

A Soviet scientist successfully transplanted the hearts of frogs; some of the animals lived for four months with new hearts completely replacing their own.

A germ-killing soap that may reduce infections was announced.

Radium treatment was tried for the prevention of aviator's ear with good results.

Meals high in starches and sugars or fats were found to help offset the effect of cold weather on body temperature and on the coordination of nerves and muscles.

Phenoxetol, a chemical relative of ethylglycol, was announced as an effective remedy for "blue pus" infection in wounds.

A sulfa drug, sulfamylon, effective against gas gangrene and other anaerobic organisms, was developed.

Increased resistance to oxygen lack at low atmospheric pressure was achieved for rats by dilantin sodium, a drug used in epilepsy, and thiourea and thiouracil, chemicals recently found effective in slowing thyroid gland activity.

Quinacrine (atabrine) was reported to be as good as quinine in control of malaria and even better in some respects.

Encouraging results in treatment of clinical tuberculosis with sulfabamide, a special kind of sulfa drug, were reported, but the drug was not developed to the point of curing the disease.

Two sets of quadruplets in the rare combination of three girls and one boy, were born in the United States, one set is believed to have been the first quadruplets in medical history delivered by a Caesarean operation; reports of the birth of quintuplets came from Argentina and Turkey.

One of the worst infantile paralysis epidemics since 1916 occurred in the United States with total cases reported for the year expected to be 20,000 or more; influenza was epidemic during the winter of 1943-44.

Experiments with rats led to the hope that

extra doses of B vitamins would improve the promin treatment of tuberculosis.

Riboflavin, one of the B vitamins, was found to be manufactured by bacteria in the human intestinal tract; revision of dietary requirement standards may follow.

Experiments with rabbits, showing that air-borne spread of tuberculosis germs could be stopped by ultraviolet irradiation, suggested a possible aid to the control of human tuberculosis.

The addition of auxiliaries, such as paraffin oil containing dead tuberculosis germs, a related microorganism, *Mycobacterium butyricum* and an absorption base known as Falba suggested a more effective influenza vaccine.

A method was developed for completely and almost instantly killing germs of both bacteria and filterable viruses with ultraviolet light, giving promise of a method of preparing more effective vaccines for some diseases.

Large doses of para-aminobenzoic acid were found effective against louse-borne typhus when treatment was begun during the first week of illness, the course of the disease was made less severe and the average duration of the fever considerably shortened.

A procedure was developed for temporary complete arrest for scientific study of the flow of blood to the human brain, using a specially designed, inflatable, head-pressure cuff, held down to the lower third of the neck; recovery of consciousness occurred quickly.

Whole communities became "guinea pigs" in controlled large scale experiments to determine whether tooth decay can be prevented by adding minute amounts of fluorine to a community's drinking water.

A special solution of the plastic, polyvinyl alcohol, was reported more than twice as effective as plasma in saving rats from dying of experimental shock.

A vaccine, promising to be effective against many strains of dysentery bacilli, was developed.

Electric sleep, differing from electric shock treatment in that it keeps the patient asleep for seven minutes, was announced as a treatment for the mental disease, schizophrenia.

Swift relief of painful muscle spasm and consequent disability in rheumatoid arthritis was reported to follow treatment with prostigmine, synthetic chemical used to treat myasthenia gravis.

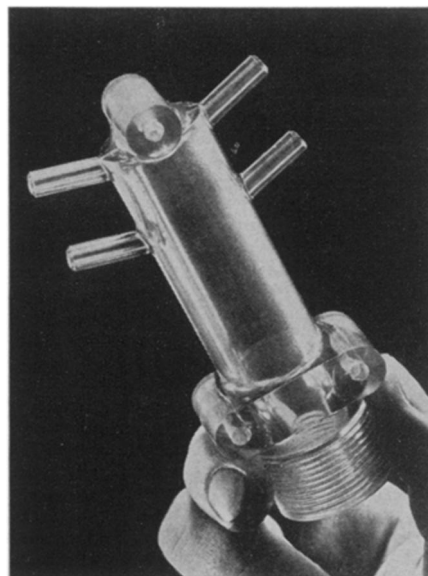
Success with sulfaguinidine treatment of Asiatic cholera was said to promise conquest of this ancient plague.

Research showed that the water requirement of the human body cannot, contrary to an old theory, be suppressed by physical conditioning; it was found that a part of the requirement for water in an emergency can be supplied by eating glucose.

Excessive production of the polysaccharide, hyaluronic acid, with failure or insufficiency of the enzyme, hyaluronidase, to break up the big acid molecule, was seen as an important factor in rheumatic fever.

Two vitamins of the B complex group, riboflavin and pellagra-preventing niacin, were reported to be factors necessary for the production and regeneration of the blood in the animal body.

Successful mice experiments led to the hope that toxoplasmosis could be cured by



KEEPS WATER OUT—To guard against the possibility of water in 100 octane gasoline, Douglas Aircraft employs this alternate static vent drain of transparent Tenite plastic in the fuel system of one of its planes. If any water should be present in the gasoline, it is automatically drained to this vent, where it accumulates and regardless of altitude, never freezes.

sulfapyridine.

Tests repeated many times on the same inveterate smokers showed they responded to tobacco with increase in blood pressure and pulse rate, decrease in the temperature of the skin at the extremities, and change in heart rate as demonstrated electro-cardiographically, together with change in the T-wave.

A case of complete pancreatectomy with survival following operation for more than a few weeks was reported; it is the first total pancreatectomy for a benign lesion of the pancreas.

The male sex hormone was found to have an important influence in promoting muscular strength.

Children were found to grow most rapidly in height in summer and in weight in winter; new bone centers in their skeletons appear most rapidly in summer.

Feeding expectant mothers thyroid to make them produce small, easily-born babies was discovered to have the reverse effect, actually producing larger babies.

Clinical studies in America confirmed belief that rubella (German measles), as first noted in Australia, contracted during the first three months of pregnancy produces congenital abnormalities of the eyes and defects of the central nervous system in the offspring.

A condition corresponding to the menopause in women was discovered to occur in some men; it was satisfactorily treated with the male sex hormone.

Delivery by Caesarean of a living baby from each horn of a double uterus in a