

## MEDICINE

**Colitis Yields to Chloromycetin**

➤ MARKED or moderate improvement in two-thirds of a group of patients with ulcerative colitis has been achieved by treatment with chloromycetin, one of the antibiotic wonder drugs, Dr. Z. T. Bercovitz of New York reported to the Medical Society of the State of New York.

Only one-third of the patients failed to show a favorable change in their condition.

Those who improved began to get better within the first month. Of the 13 markedly improved patients, nine have remained completely well, or in "complete remissions" as Dr. Bercovitz phrased it, for periods of more than a year.

In some cases there were relapses but they were mild and the patients promptly got better when chloromycetin was started again. No patient ever relapsed to as severe a state of illness as before the mold drug treatment.

At least five years must elapse, however, Dr. Bercovitz said, before final conclusions on the results of treatment can be drawn. This period is needed to allow for evaluation of chloromycetin and also the many other conditions which may affect this disease.

Science News Letter, May 20, 1950

## MEDICINE

**Rubberized Forceps Make Childbirth Safer**

➤ RUBBERIZED forceps blades for preventing injury to the new baby's skull when forceps must be used to assist in the birth were shown by Dr. Emanuel M. Greenberg of Beth Israel Hospital, New York, at the meeting in New York of the Medical Society of the State of New York.

The blades were rubberized by dipping in liquid latex until a thin coating had been applied.

Science News Letter, May 20, 1950

## AGRICULTURE

**Vertical Stacks Replace Smudge Pots in Orchards**

➤ SMUDGE pots to warm orchards, protecting them from frost, can be replaced by vertical stacks through which air circulates from top to bottom.

Usually when smudge pots are used, the air 100 to 200 feet above the ground is about nine to 18 degrees Fahrenheit warmer than the temperature near the ground.

Dr. Robert G. Fleagle of the University of Washington has calculated that the energy required to operate fans to force this warm, upper air down a vertical stack is much less than that needed to heat up air near the ground to the same temperature.

He further found that when only a small quantity of warm air is required, no power would be needed to turn a fan at the top of the stack. The energy of the wind itself would do the job. If, however, the wind is at high speed, there is no need for the stack since any higher warm air would then be sufficiently circulated.

The advantages claimed for the stack method of warming crops include greater uniformity of temperature, absence of smoke, gas and dirt, less attention required and the possibility of using the wind itself for power.

Science News Letter, May 20, 1950

## VETERINARY MEDICINE

**Call the Vet if Rover Looks Yellow**

➤ IF Rover begins to look a little yellowish, he needs a vet. Severe and chronic kidney trouble in dogs is now known to be preceded by a jaundice-producing infection called leptospirosis, Dr. Gerry B. Schelle of Boston told the American Animal Hospital Association's annual convention in Denver.

The disease has spread to thousands of U.S. dogs, Dr. Schelle said. Interfering with the function of liver and kidneys, it disables and then kills if affected animals are not treated promptly.

Acute nephritis—a severe inflammation of the kidneys—comes in the early stages of leptospirosis. Unless wiped out quickly, it can affect the dog for the rest of its life.

The antibiotic drugs streptomycin and aureomycin are being used by veterinarians to cure leptospirosis.

Science News Letter, May 20, 1950

## MEDICINE

**Mustard Gas Helps Kidney Patients**

➤ NITROGEN mustard of war gas fame may prove helpful for treating one type of kidney disease, known as glomerulonephritis.

Striking improvement after this treatment in three out of eight patients was reported by Drs. Herbert Chasis, William Goldring and David S. Baldwin of New York at the meeting of the American Society for Clinical Investigation.

Of the other five patients, two died and three are still under treatment.

The improvement in the first three has persisted for seven months, eight months and one month. The patients had been sick for from five months to almost three years, in one case.

Temporary return of the glomerular (filtration) function of the kidneys toward normal was induced by the nitrogen mustard treatment, various tests showed. After these temporary changes had been repeatedly brought on by several courses of treatment, improvement in function persisted.

Science News Letter, May 20, 1950



## AGRICULTURE

**New Spray Brings Rosy Cheeks to Apples**

➤ ROSY cheeks for apples?

Science says "yes." There is a method just discovered by Cornell's Agricultural Experiment Station. It has not yet been developed commercially.

The new spray has a long name—sodium diethyldithiocarbamate. It in itself doesn't add the color; the red pigment in the apple still does that. The spray merely increases the production of this pigment, anthocyanin.

Dr. Masami Uota, now employed by the U. S. Department of Agriculture in Wenatchee, Wash., found that spray-treated apples had about 40% more color than untreated ones. And the red color was more intense on treated fruit, adding to its attractiveness. Occasionally there was some injury to foliage and fruit. Further details and a commercially acceptable spray remain to be worked out.

Science News Letter, May 20, 1950

## CHEMISTRY

**Ether Blends with Fuels Promote Anti-Knocking**

➤ THE best type of ether to use in fuels for airplane engines to eliminate knock is what chemists call methyl tert-butyl ether, the Lewis Flight Propulsion Laboratory states in a new report.

This laboratory is a research institution maintained by the National Advisory Committee for Aeronautics, a government agency with headquarters at Washington, D. C. Its primary job is the study of all types of airplane propulsion and all types of fuels for the purpose.

From studies of 23 ethers, each blended with base fuels, methyl tert-butyl appears to have the best anti-knock effectiveness, the report says. It is an organic chemical, the "tert" standing for tertiary.

In general, according to the report of I. L. Drell and J. R. Branstetter of the laboratory staff, tert-butyl alkyl ethers gave the highest blend knock ratings, followed by aromatic alkyl ethers and others.

The low knock limit of "ether" (diethyl ether) has long been known and has been studied for the past two decades. During World War II, knock studies of methyl tert-butyl ether were made but the results were not published. The results of German studies, however, have been published.

The NACA investigation had to do with a systematic program of research on ethers deemed worthy of further study. The report gives information relative to the ethers and fuels used and the knock ratings obtained.

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# CE FIELDS

## MEDICINE

### Hodgkin's Disease Itch Relieved by Cell Acid

► THE itching which often tortures victims of Hodgkin's disease can be relieved, at least temporarily, in half the cases by a chemical called adenylic acid, scientists at St. Vincent's Hospital in New York have discovered.

Adenylic acid is a breakdown product of cell chemistry and is one of the factors in the vitamin B complex. Trials of the effects of other products of body chemistry are now under way, reports the American Cancer Society which supports the research.

Science News Letter, May 20, 1950

## PLANT PATHOLOGY

### U. S. Keeps Philippines From Coming to Rope's End

► A U. S. specialist on tropical plant diseases is in the Philippines to keep the islands, figuratively speaking, from coming to the end of their rope.

He is Dr. Otto A. Reinking, Cornell University professor who is on a special mission as a technical adviser to the Philippine Government from the U. S. Department of Agriculture.

The enemy he was sent to combat is a disease attacking the manila hemp plant, abaca, which provides the raw material for the best marine rope in the world. Called the mosaic disease, it has hindered the recovery of the hemp industry from the beating it took in World War II.

Dr. Reinking and his wife, who is also a plant pathologist, will aid Philippine scientists in their fight against other island diseases. One is called cadang-cadang. A coconut disease, it is causing serious losses to this important Philippine export crop.

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## ENGINEERING

### Sun Supplied 75% Heat Needed for Solar House

► DIRECT sunlight supplied three-fourths of the heat needed to keep an occupied experimental solar-house comfortable during the past winter, it was revealed by the Massachusetts Institute of Technology.

The building is a five-room house erected in Cambridge, Mass., to study solar heating and to determine how far direct sunlight can be used for heating in New England instead of ordinary fuels. As a result of the test, staff members of the institute stated that a house heated 90% by the sun's rays

will be possible without excessive construction costs.

In appearance the house is a typical modern-style residence except for its heat collector on the roof. Water is used to store the heat of sunshiny days for nights and cloudy conditions. It is warmed by a special flat collector on the roof.

The water warmed by the collector is pumped into an insulated tank, and from there, when needed, through pipes in ceilings. Heat is radiated to the rooms by standard radiant heating panels. Supplementary heat when required is electrical.

The roof heat collector unit slopes 57 degrees to the horizontal, faces south and presents a net area of 400 square feet to the sun. The rest of the roof is aluminum so that additional solar heat reaches the collector by reflection.

The collection and heating unit is a compact, closed-cycle system at atmospheric pressure. The parts of the unit include the roof collectors, an attic storage tank, a radiant ceiling panel heater, two circulating pumps and controls. Thermostats control automatically water circulation to the panels.

This M.I.T. solar house was built by funds provided by Dr. Godfrey L. Cabot of Boston. The solar heating studies are directed by L. B. Anderson, architect, H. C. Hottel, chemist, A. G. H. Dietz, building engineer, A. L. Hesselschwerdt, Jr., professors on the institute's staff.

Science News Letter, May 20, 1950

## DENTISTRY

### Value Of Ammoniated Powders Questioned

► AMMONIATED tooth powders and mouth washes, widely advertised in the United States as helping prevent tooth decay, will not accomplish this purpose, in the opinion of three British scientists.

The use of ammoniated dentifrices is based on the observation of some American scientists that persons who are naturally free from tooth decay have the kind of saliva which is capable of producing more ammonia under certain conditions than have persons susceptible to tooth decay.

Drs. G. Neil Jenkins, Donald E. Wright and T. K. Miller, physiologists and bacteriologist of King's College Medical School at Newcastle-upon-Tyne, have repeated the American experiments and find no difference between the behavior of salivas from persons with different rates of tooth decay.

If keeping the mouth alkaline instead of acid should prove effective in reducing or preventing tooth decay, dibasic sodium phosphate would be as good as dibasic ammonium phosphate, Dr. Jenkins and colleagues also found.

Detailed findings have not yet been issued by the Newcastle scientists although a preliminary note has been published in the British science journal, NATURE (April 15).

Science News Letter, May 20, 1950

## STATISTICS

### Death Rate for Married Women Halved in 50 Years

► THE death rate for married women over age 20 has been cut in half during the past half century. For those at ages 20 to 24 the rate dropped nearly 90% between 1900 and 1948.

Death rate figures for married men also show a reduction since 1900 but the decline was less than one-third, statisticians of the Metropolitan Life Insurance Company in New York report.

The death rate for unmarried women over age 20 dropped two-fifths between 1900 and 1948. Unmarried men had the same one-third drop in death rate as the married men.

The reduced toll from maternity accounts to a large extent for the big reduction in death rate for married women. This results partly from the long-term decline in the birth rate and partly from marked progress in safeguarding mothers during pregnancy and childbirth.

Science News Letter, May 20, 1950

## MEDICINE

### Medicine Injected by New Automatic Syringe

► SHOTS of medicines can now be given by an electrically controlled automatic syringe developed by Dr. George B. Jerzy Glass of New York Medical College.

From a few drops (5 cc) to about three ounces can be given at a precise rate of speed ranging from a few minutes to several hours and maintained at a fixed rate, he told the Medical Society of the State of New York meeting in New York.

The instrument can be used for a wide range of procedures including local and other kinds of anesthesia and slow injection of drugs when desirable.

Science News Letter, May 20, 1950

## MATHEMATICS

### To Run in Rain To Get Less Wet Is Correct

► YOUR intuition is right—run in the rain and you will get less wet. A mathematical study has now proved the soundness of this intuitive advice.

Dr. Jack W. Rizika of the Massachusetts Institute of Technology has satisfied a small part of human curiosity by his analysis of the proper speed you should take to get the least wet when it is raining and you want to go from one place to another. Without an umbrella, that is.

If you could run fast enough, you wouldn't get wet at all! To do this, however, you would have to have a velocity approaching infinity.

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