MEDICINE

Beams Treat Gallstones

Gallstones, and probably kidney stones, can be shattered into tiny fragments by ultrasonic beams in one-fourth of a minute.

➤ PATIENTS with gallstones and others with kidney stones may in future be successfully treated by high frequency sound waves instead of by surgery or medicines.

This possibility appears from studies reported by Dr. Harold Lampert of the Yale School of Medicine, and Drs. Herbert F. Newman and Ralph Eichhorn of Beth Israel Hospital, New York, at the meeting of the Federation of American Societies for Experimental Biology, Atlantic City, N. J.

Gallstones, and perhaps kidney stones, can be shattered into tiny fragments in 15 seconds by an intense ultrasonic beam, these doctors reported. The fragments of the gallstones could pass into the intestines and be excreted through natural elimination.

The method has not yet been tried on patients because of lack of suitable equipment. Some expressly designed for the purpose is now being developed by the Crystal Research Laboratories in Hartford, Conn.

In trials on dogs, the doctors cut open the belly and introduced the ultrasound beam through this opening to the gallbladder. The tissues surrounding the gallstones were not damaged. Both dogs and rabbits treated with ultrasound recovered without ill effects.

The tissues surrounding the gallstones are not damaged, the doctors found, when the ultrasound is transmitted through water. This is because living tissue is as elastic as water and seems to "roll with the punch," stretching without splitting on impact with the beam. Solid gallstones, however, are cracked and fragmented.

The procedure will not be noisy because ultrasound waves cannot be heard by the human ear.

Science News Letter, April 29, 1950

ZOOLOGY

Rats Are Dead End Stars

See Front Cover

➤ RATS are starring in a series of seven movies which would never get by Hollywood's Johnston office. In sets built "on location" on Oatland Island off the coast of Georgia, more than 2,000 rats are playing the story of their lives.

The purpose of the movies, produced by the Public Health Service and the Army Medical Department, is for training civilian and military personnel in the control of rats and ratborne diseases. The first film, "The Rat Problem," summarizes the seriousness of the damage to life, health and property caused by rodents. It shows rats engaged in their customary activities, contaminating food, destroying property, making love, producing little ones and fighting. An actual scene showing two rats engaged in a death struggle from the first of a series of rat control movies is shown on this week's cover of SCIENCE NEWS LETTER. As the fight progresses, both rats seem literally to stand on their tails. The rat at the left is lunging at the throat of his opponent. The fight will be climaxed when one sinks his fangs deep into the other's throat.

Through actual case histories, the film also traces the manner in which rats spread murine typhus fever, plague and other ratborne diseases affecting man.

Science writers—turned movie columnists for the day—visited the sets. Housed in two large Army tents, these sets realistically portray the roof, attic, kitchen, living room, bedroom, basement and other parts of a house.

Later films in the series will show the habits and characteristics of the two most common rats found in the United States, roof and Norway rats. They also will portray the various means of control, including sanitation, rat-proofing, rat killing and DDT dusting.

Science News Letter, April 29, 1950

MEDICINE

Muscle Weakness Disease Treated by Gas Chemical

➤ A NEW chemical which may be related to some of the military "nerve gases" still on the secret list is proving a valuable medicine for the muscle weakness disease, myasthenia gravis.

The chemical is octomethyl pyrophosphoramide, or OMPA for short. It restores muscular strength to myasthenia gravis victims by stimulating the nervous system and muscles through reaction with a body chemical, cholinesterase. Patients are able to lead normal active lives during treatment and in some cases OMPA may have halted the progress of the disease. If this proves true, it may be a "cure" for the condition.

OMPA and its effects in myasthenia gravis were reported by Drs. Kenneth P. DuBois and John Doull of the University of Chicago's Toxicity Laboratory at the meeting of the Federation of American Societies for Experimental Biology.

Science News Letter, April 29, 1950

HOME ECONOMICS

Powder Makes Clothes Resistant to Soil

➤ CLEANER cotton clothes on washday are promised from a white powder that can be added to the laundry rinse water.

Known as CMC, or carboxymethyl cellulose, the new rinsing treatment may be used in the home, by commercial laundries or by textile manufacturers. The powder should not be added to soapy water, however, since it might turn the soap into a jelly-like mass, and leave the clothes gummy.

CMC gives the fibers a smooth coating, making them more resistant to soil. It is the result of research at the Institute of Textile Technology, Charlottesville, Va., sponsored by the U. S. Department of Agriculture.

About three level tablespoons of CMC to each gallon of rinse water improves the soil resistance of the goods without changing the feel or appearance of the fabric, department officials state. CMC is available in wholesale lots, but has not yet come on the market in small packages for home use.

Science News Letter, April 29, 1950

SHOWERS ON DEMAND—The rooftop weather laboratory of the Westinghouse Electric Corporation borrows a leaf from April's notebook in putting new street lighting units through pelting rain tests. Engineer George Horton demonstrates the outdoor shower bath arrangement set up to douse new lights from all angles to make sure hard rains will not interfere with their efficiency.