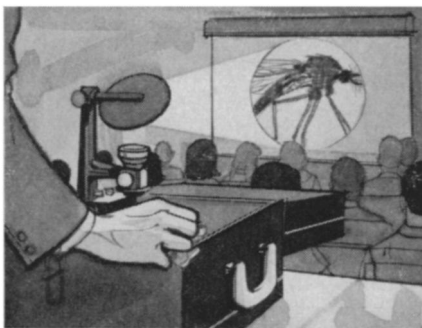
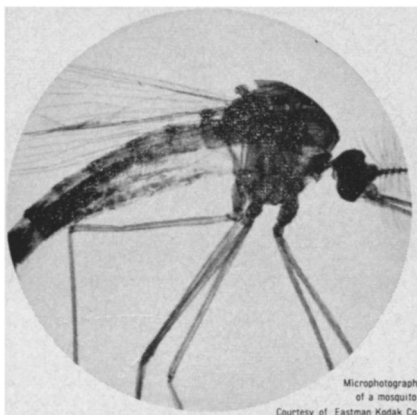
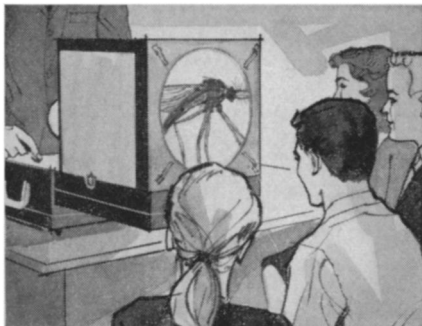


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INVENTION

Current U.S. Patents

Clinistix, a test for sugar in the urine that uses a chemical indicator strip, is now patented after being on the market for eight years—By William McCann

➤ **THE SIMPLE DIABETES TEST** that is widely used throughout the country was awarded a patent by the U.S. Patent Office.

The test, which is marketed under the name "Clinistix," is a simple method of recognizing sugar in the urine—an important clue in identifying diabetes, reported inventor Dr. Alfred H. Free, Elkhart, Ind.

A strip of cellulose a few inches long has a special chemical preparation consisting of glucose-oxidase, catalase and an indicator material on its tip. When the strip is dipped into a urine sample, the indicator material changes from a red to purple color in the presence of sugar.

Clinistix may also be bought at the drug store by patients themselves at the suggestion of their physicians to study how effectively they are controlling a diabetes problem, Dr. Free said.

Clinistix, which has been on the market for about eight years, was granted patent 3,164,534, being assigned to Miles Laboratories, Inc., Elkhart, Ind.

In addition to being widely used in this country for detecting and estimating sugar content of body fluids, the test is used throughout Europe, Dr. Free said.

Firing System for Depth Charges

A system for firing depth charges to destroy or damage submarines, kept secret for nearly 20 years, earned patent 3,162,119,

which was licensed to the Government for royalty-free use.

The system depends on changes in the earth's magnetic field that are caused by the submarine to be attacked. When the magnetometers on the depth charge detect first an increase, then a decrease in the earth's magnetic field, the firing mechanism is triggered.

Joseph B. Tate, Jr., and Louis W. Erath were working for the U.S. Navy in Washington, D.C., when they developed the system.

Electronic Shark Repeller

An electronic shark repeller that can be worn by astronauts or swimmers earned patent 3,164,772 for John Hicks IV of Fairfax, Va., who assigned rights to Phillips E. Hicks, also of Fairfax.

The system for repelling sharks is being used throughout the world. It consists of repeatedly sending an electrical current through a dipole antenna that can be carried on a swimmer's back or attached to a raft. This will repel sharks up to a distance of 20 to 30 feet.

Mr. Hicks reports that a hungry shark can be within striking distance of meat or can actually have seized the meat, but when electricity is discharged to the antenna, the shark releases the meat and swims away. No electrical shock is felt by a person in the water holding the dipole antenna.

Since salt water is a good conductor of electricity, all current is conducted almost directly between the halves of the antenna. Therefore voltage is not repelling the sharks.

Mr. Hicks surmises that the electronic repeller may over-stimulate the shark's "ampullae of Lorenzini," which are a complex system of sensory structures found under the skin of the head, thus driving the shark away.

The unit is also effective against rays, crocodiles and alligators.

Other Patents Issued

A magnetic device widely used in electronic computers to achieve fast access to information stored in magnetic memories earned patent 3,161,813. Dr. Jan A. Rajchman of Princeton, N.J., assigned rights to this basic computer to Radio Corporation of America.

A high-speed transit system that uses air bearings was patented by Michael W. Lathers of Birmingham, Mich., and David M. Lyon of La Grange, Ill. They assigned rights to patent 3,164,103 to General Motors Corporation, Detroit.

A two-wheeled motor vehicle with a passenger compartment for only one person to be used as a taxicab, for which Thomas M. Morris of Ridgefield Park, N.J., was granted patent 3,164,396.

• Science News Letter, 87:62 January 23, 1965

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