

scientists, particularly Dr. H. L. Jones of Oklahoma A. & M., are studying the possibility of identifying and tracking tornadoes by these electrical discharges.

Their equipment tells them the direction from which strong lightning strokes are coming. By using three or more stations, it may be possible to pinpoint the storm's location. Three sferics stations in Texas and Louisiana will be operated by the Weather Bureau this spring, and the U. S. Air Force will have a similar network in Oklahoma.

When whole-state or half-state tornado warning advisories are issued by the Weather Bureau, no particular action is called for, except an extra close following of radio reports and an occasional glance at clouds to the west and south if the sky becomes threatening.

When a person actually sees a tornado approaching, however, swift action is called

for.

The safest place to be during a "twister" is in a cave, storm cellar or other underground excavation that has an air outlet. If time does not permit this, lie flat in the nearest depression such as a ditch or ravine in the open country. Always try to move at right angles to the tornado's path.

In a city, seek inside shelter, preferably along the inside walls on the lower floors of a steel-reinforced building. It is wise to stay away from windows.

At home in a frame house, the southwest corner of the lowest floor, the basement if possible, offers the most safety.

People living in brick or stone houses should find other shelter, such as a storm cellar or the southwest corner of a frame house.

If time permits, turn off the gas and electricity.

Science News Letter, March 12, 1955

MEDICINE

"Jet" Shot In Arm

► THE MILITARY has even gone automatic on its "shots" in the arm. Pistol-shaped jets for injecting typhoid and other vaccines have been developed at the Army Medical Service Graduate School, Washington, D. C.

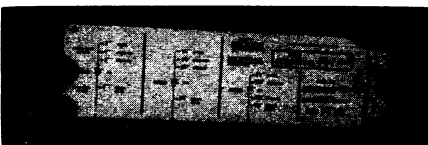
The new device has been tried on military inductees at an Army reception center with good results, Dr. Joel Warren of Walter Reed Army Medical Center, Washington, and Frank A. Zihlerl, Arthur W. Kish and Louis A. Zihlerl of Cleveland, report to the *Journal of the American Medical Association* (Feb. 19).

The new jets are called automatic jet injection syringes. They are designed for speedy vaccination of large numbers of persons. In the most recent study 1,685 persons were vaccinated daily in groups of 117 to 252. Those trained to use the new automatic jet syringes were able easily to keep pace with highly trained corpsmen using preloaded hypodermic needles and syringes.

While not entirely painless, inductees said the jet injection did not hurt as much as a needle injection given at the same time in the other arm.

The needle-free automatic injector shoots

AT YOUR FINGERTIPS — More than 800 Element Facts



The Elemental Slyd-Rul now completely up to date. Symbol, weight, density, number, valences, color, M & BP in °C for 98 elements plus recent name changes. In tough-check cardboard stock. \$1. postpaid. Student rate: 12 or more, 75c ea. The Slyd-Rul Co., Canaan, N. Y.

a tiny jet of vaccine right through the skin under about 250 pounds of pressure in about one second.

The device is run by a motor-driven hydraulic pump. The injector unit is built like an automatic pistol with two triggers. The lower trigger reloads and cocks the piston, and the upper trigger "fires."

The present design is not considered a final one ready for commercial production. The units now available are the property of the armed services and are for use solely for research and development.

Science News Letter, March 12, 1955

MEDICINE

Disease Virus Raised In Embryonic Fishes

► A NEW way of propagating disease-causing viruses has been discovered through use of the embryos of an aquarium fish that bears its young alive.

Following success in culturing through eight generations of the eastern equine encephalomyelitis or EEE virus, it is now hoped that viviparous fishes will be used in the study of the puzzling animal virus causing foot and mouth disease or aftosa.

Reported to the New York Academy of Sciences by Dr. Murray Sanders and Manuel G. Soret of the University of Miami, South Miami, Fla., the living embryos are removed by Cesarean operation upon the common mosquito-eating fish, *Gambusia*. The virus grows in the embryo fish as they are reared in simple tissue culture fluid.

The American Museum of Natural History's Lerner Marine Laboratory at Bimini, in the Bahamas, where the fish are found, was the scene of the development that may now be used for the successful propagation of other human viruses.

Science News Letter, March 12, 1955

SAVE ON Palley OPTICAL BARGAINS

Palley HY-POWER
100-200-300 POWER
3-TURRET MICROSCOPE
NOW ONLY 895



NEW

Compares to Instruments selling up to \$75.00

An UNSURPASSED VALUE! Has fine ground and polished achromatic lenses. Precision ALL-METAL construction. Triple revolving objective lens turret enabling selection of 100X - 200X - 300X. Has right or left hand rack and pinion adjustment for smooth, precise movement. 90° inclination. Adjustable plano sub-stage mirror. Complete in sturdy, dovetailed hardwood case. Your Satisfaction GUARANTEED!

NEW IMPORTED 1500X RESEARCH MICROSCOPE
\$18950



NEW

Compares to Instruments selling up to \$230

For BACTERIOLOGY - HISTOLOGY - PATHOLOGY BIOLOGY - BOTANY - ETC.

A top quality, professional instrument. Has a triple revolving turret with three precision ground & polished achromatic objective lenses - 10X, 40X and 100X oil immersion. Plus three Huygenian eyepieces of 5X, 10X and 15X giving up to 1500 power magnification. Has a sturdy, lifetime metal body which inclines through 90° for micro-photography. Rack and pinion control. Fine focusing adjustment. Large, 120mm x 113mm square stage which holds slides up to 3"x2". Sub-stage has an Abbe two-lens divisible condenser with iris diaphragm and rack and pinion motion. Complete in fitted professional type carrying case with lock and key. Satisfaction GUARANTEED or Your Money Refunded!

NEW ARMY SURPLUS
178mm-f:2.5 EASTMAN CAMERA LENS
A \$200 SURPLUS VALUE



ONLY 6950

Originally designed for use on K-21 and K-24 Aerial Cameras. A genuine EASTMAN AERO EKTAR 178mm lens. Has speeds from f:2.5 to f:16. Focal length is 7". This amazing lens is NEW, in original cans. Guaranteed perfect condition. Ideal for Color or Black & White. Exceptionally good for night work or in poor light conditions. Comes with 2 filters; 1 Polarized (for haze) and 1 yellow, plus a filter adapter, a lens heater for high altitudes and a lens dust cap. Can be adapted to 35mm cameras as well as others as a Telephoto lens (see adapter and mount listings below) . . .

SPEED GRAPHIC ADAPTERS for above lens - Includes Lens Board, Extension Tube and Bed Support.
2 1/4" X 3 1/4" **2175** 3 1/4" X 4 1/4" **1875** 4" X 5" **1495**

35mm ADAPTERS and MOUNTS for above lens Complete - no other parts to buy. Focus from 8ft to infinity - marked on the mount. **8950**
LEICA - CONTAX S&D - EXACTA **8950**
CONTAX 2A . . . \$109.50 - HASSALBAD . . . \$139.50

Pay by M.O. or check. 1/2 deposit with C.O.D.'s. Prices F.O.B. Los Angeles.

PALLEY SUPPLY CO.

2263 E. VERNON AVE., DEPT 14C
LOS ANGELES 58, CALIF