TORNADO'S TERRIFYING FUNNEL—Why tornadoes are aptly named "twisters" is strikingly shown in this photograph taken on the afternoon of June 27, 1955, when the funnel-shaped tornado cloud was four and a half miles away.

These two hours account for 23% of the storms.

Tornado forecasts for the entire United States are prepared at the Weather Bureau's Severe Local Storm Forecasting Center in Kansas City. Specialists there analyze and interpret a large number of weather charts and diagrams to spot any areas in the country where tornado formation is likely.

Their forecasts are coordinated with district offices, and are distributed to the public by radio and television stations in or near the threatened areas up to six hours in advance.

The various tornado studies and experiments being made by the Weather Bureau, by universities and by research organizations are aimed at a better understanding of the conditions under which "twisters" are brewed and how they grow, with the aim of improved forecasting, thus helping to save lives and cut down property damage.

Within a few years, the Weather Bureau plans to have about 100 radars operating, blanketing the country with a network for spotting any severe storms, particularly hurricanes and tornadoes.

Science News Letter, February 23, 1957

MEDICINE

Need "Trauma" Hospitals

➤ TRAUMA hospitals, to train young surgeons in the treatment of injuries, are needed throughout the country, Dr. Michael L. Mason, professor of surgery at Northwestern University Medical School, proposes.

Injuries that cause open wounds have assumed increasing interest and importance. Accidents take about 100,000 lives every year, cause up to 500,000 severe injuries, and probably total close to 10,000,000 injuries in the aggregate. Fortunately, most injuries are trivial and lead to little or no disability, particularly if a few basic principles of care are followed in their management.

But Dr. Mason feels that the warnings about the need for preparation to handle mass casualties, whether they come from nuclear warfare or civilian disasters, have not been heeded.

"The important thing is that we become trauma conscious," he believes.

"If some of the diseases for which special campaigns have been set up caused one-tenth the mortality, misery, financial loss and disability that trauma does, or if we were threatened with an epidemic one-thousandth as serious as nuclear warfare, the country would go hysterical in campaigns to eradicate the disease and to train doctors in its management," Dr. Mason said.

Fortunately, more and more hospital training is being given in the treatment of wounds, the surgeon said, and the old system whereby the emergency room is staffed by the youngest and least experienced members of the hospital staff is changing.

But still, Dr. Mason finds that trauma has been dignified by honorable status in only a few of the country's large centers and teaching hospitals.

Dr. Mason reports on the need for trauma hospitals and other new approaches to the treatment of open wounds in the *Bulletin of the American College of Surgeons* (Jan.-Feb.).

Science News Letter, February 23, 1957

CHEMISTRY

New Magnesium Alloy Means Faster Planes

➤ A NEW alloy that promises to give airplanes and missiles a greater kick was reported. It is a combination of magnesium and thorium.

Undergoing extensive tests by its developers, the Dow Chemical Company, Midland, Mich., the alloy has already proved that it can better withstand high temperatures than any aluminum or magnesium alloy being used today. The Air Research and Development Command in Baltimore, Md., for whom the new alloy was made, says that use of the alloy may make it possible for Air Force planes and missiles to go faster and farther.

The metal was subjected to a temperature of 700 degrees Fahrenheit for 100 hours and there was no change in its tensile strength, yield strength or elongation properties. Tabbed HM 21XA-T8, the new alloy is 30% lighter than aluminum alloys.

Science News Letter, February 23, 1957

MEDICINE

Pulling on Infants Causes Bone Injury

➤ PULLING a child's arm to keep him from falling can cause an injury that may be mistaken for scurvy, bone infection, or even a malignant tumor of the bone, Dr. Morris S. Friedman, South Bend, Ind., told the American Academy of Orthopaedic Surgeons meeting in Chicago.

The injury may be nothing more than a self-correcting inflammation of the periosteum, the membrane that covers the bone. Infants and young children have a much more loosely attached periosteum which can be stripped off more easily than an adult's can, Dr. Friedman reported.

The injury can occur without being suspected and can even result from a strong pull exerted on the infant's legs during the birth process.

Even light injuries can cause internal bleeding in the membrane. This is followed by new bone formation which sometimes looks like a faint fracture line in an X-ray picture, the physician reported.

The problem will clear up by itself within a few weeks and should not be confused with more serious conditions, he said.

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