

MEDICINE

Antidote to Spider Bite

A chemical called calcium gluconate has helped patients recover from the black widow's deadly bite. Doctors are alerted to her menace in this country.

► **SUCCESSFUL** use of a lime and sugar chemical, calcium gluconate, as antidote to the "kiss of death" delivered by the black widow spider is reported by Dr. William E. R. Greer of Boston University School of Medicine.

The six patients who all recovered when Dr. Greer injected this chemical into their veins were seen in a tropical overseas area. But the black widow spider can be met as far north as Cape Cod and New Hampshire, and in situations as remote from Pacific jungles as high office buildings in American cities.

One object of Dr. Greer's black widow report in the *NEW ENGLAND JOURNAL OF MEDICINE* (Jan. 6) is to alert fellow physicians to the black widow spider menace. The spider is present in all but seven states in America, he points out.

Victims may be mistakenly diagnosed as suffering from appendicitis or other acute surgical emergency, and operated on needlessly, he warns further.

The black widow poison is reported to be 15 times as powerful as rattlesnake venom. About an hour after a bite, the "victim writhes in agony, terror-stricken, and expressing fears of death."

Besides the excruciating pain at the bitten place, the burning sensation throughout the body, the widespread agonizing muscular pains and sometimes profound shock, the symptoms include burning of the soles of the feet. This last, Dr. Greer says, is characteristic enough to help the doctor to a diagnosis when there is doubt about whether the bite was from the black widow or something else.

The black widow can be recognized by the hour-glass shaped orange spots on her belly. She gets her nickname from her habit of capturing and killing the much smaller male "after he has served the ends of species preservation." She is a shy, timid and confused creature who attacks only when cornered or compressed, as between skin and clothing. "These spiders," Dr. Greer states, "are found in greatest numbers in the vicinity of human habitation, not only in outdoor privies as was formerly believed, but also in beds, garages, automobiles and tents."

About 60 different remedies or antidotes for black widow poisoning have been tried. The calcium gluconate Dr. Greer used successfully was first proposed by two other scientists, E. W. Gilbert and C. M. Stewart.

Science News Letter, January 29, 1949



NEW TELEVISION PICTURE TUBE—The new tube, which is shown above the seven-inch-diameter tube now used in low-priced sets, has a diameter of eight and one-half inches, and will offer 50% more picture area without additional cost.

ENGINEERING

Television Viewing Area Larger with New Tube

► A **BIGGER** television picture tube, revealed by General Electric and developed for use in low-cost receivers, will provide 50% more viewing area than the seven-inch tubes it will replace. It will handle a 39-square-inch picture.

First of its size ever designed, the new tube has a diameter of eight and one-half inches and will cost no more to build than the seven-inch tubes now in use in low-priced sets. It is a metal type. Other details are not yet released. Samples will be available soon. Heavy production will get under way during the year.

Science News Letter, January 29, 1949

GEOLOGY

Earth's Magnetic Field Is Same for 100,000,000 Years

► **THE EARTH'S** magnetic field has been pretty much the same for at least 100,000,000 years, a three-man field research team from the Carnegie Institution of Washington has discovered. They present their evidence in the *PHYSICAL REVIEW* (Jan. 1).

The three men, O. W. Torresson, Thomas Murphy and John W. Graham, cruised the western part of this country last summer in two specially equipped laboratory trucks. In various localities they carefully cut small blocks of sedimentary rock, and tested

ENGINEERING

New Building Code Issued

► **SAFETY** to life, as well as property, is the keynote of a new national building code issued by the National Board of Fire Underwriters in New York for voluntary adoption in whole or in part by state or local administrative authorities.

It is an "up-to-date" code, recognizing many new advances in building practice which are intended to ease construction costs. It recognizes the new modular dimensions being used in the manufacture of many building materials today. This means in four-inch, or multiples of four-inch, dimensions in building materials, including prefabricated panels for sidewalls or interior wallboard covering. Use of modular dimensional materials saves waste of lumber and time on a construction job.

The code recognizes increased allowable stresses in lumber and steel, as a result of advances in quality control and experiences in the field. Another economy factor is the recognition of prefabricated flues in place of expensive masonry chimneys. In dwell-

ing construction, the use of these flues results in considerable savings.

This new code, a revision of previous ones issued by the same organization and widely used in America, covers all types of building construction, including among others motion picture theaters, open air parking garages, and windowless structures now increasingly used in many types of buildings.

With modern air conditioning and lighting, windows are no longer necessary or desirable in certain types of buildings. But a building without windows provides a severe handicap to fire departments by denying access to a fire. The code covers this problem by requiring automatic sprinkler protection in such structures.

The new code may be obtained without cost by any person concerned with building construction from offices of the National Board of Fire Underwriters in New York, or in Chicago or San Francisco. Cities adopting the code may obtain 25 copies free, and additional copies at a nominal charge.

Science News Letter, January 29, 1949