PUBLIC SAFETY

Test Warning Devices

Civil Defense planners are working to perfect an indoor alarm system to warn of impending air attack. Methods using electric power, telephone and radio being tried.

➤ EVERY HOME in the United States may have an indoor alarm system installed in it to warn of an impending air attack.

Civil Defense engineers are trying to perfect an indoor warning system that will compete successfully with dish washers, crying babies and television. Outdoor sirens are effective if heard, but Civil Defense planners fear many people at home often cannot hear the warning wail.

Three indoor warning systems now are being evaluated and tested. They are the use of electric power, telephone or radio. It is hoped one can be perfected to alert persons at home of an impending enemy attack, either immediately or in a few hours.

The most promising system to reach the greatest number of Americans, with equipment on hand, uses electric power. A system based on transmitting signals over electric power transmission lines conceivably might reach 99% of the population in homes with electricity. In addition, an adequate source of power for operating the system exists.

One signal could be sent out to all electric power customers from a relatively small number of power stations.

One use of electric power would work in this manner. A small reed, tuned to go off as an alarm at a predetermined frequency, would be installed in each home. When an atomic or hydrogen bomb attack is imminent, the power station would change the frequency of power output and the reed would sound the alarm.

Another possibility for warning home dwellers is the telephone. All phones throughout the country could be rung simultaneously for several seconds or a minute. The rings would be in the same code form as outdoor siren wails.

Especially constructed radios for each home offer the added advantage that they can be used both as warning and information devices. Radios operating at 110-volt power would be on at all times, but would not produce sound until the alert signal was given.

They might then be carried to a shelter and tuned to Civil Defense Conelrad stations for details and instructions.

Civil Defense planners are now working on the basis of warning the public of an attack with a one-hour minimum and a maximum of from five to six hours.

Some experts foresee, however, that in ten years time the Russians will have an intercontinental ballistic missile that can be fired at the United States and explode here one-half hour after leaving Russian soil. This would give only a very few minutes' warning time, if any.

Science News Letter, July 30, 1955

METEOROLOGY

Meteor Dust Causes Rain

➤ BILLIONS OF tiny particles sifting down from the sky may have caused an exceptionally heavy rain in Panama last January, B. H. Cwilong of the research yacht Princess Waimai in the Canal Zone, reported.

Resulting from meteor showers smashing into the earth's atmosphere, appearance of the particles in mid-January confirms the suggestion made by Dr. E. G. Bowen that meteoric dust floating through the earth's atmosphere can cause rain. The meteoric particles act as nuclei on which raindrops condense.

Mr. Cwilong described in *Nature* (July 16) his discovery of a "very large number of nuclei in Panama on Jan. 13, accompanied by "prolonged, continuous rain," abnormal in Panama latitudes at that time of the year.

The nuclei were "unusual" because tests showed they caused moisture condensation at temperatures 15 to 20 degrees Centigrade higher than those of particles usually found in the atmosphere.

He first suspected the strange nuclei resulted from hydrogen bomb explosions, so sent his results privately to several research centers. Mr. Cwilong thus learned of other scientists who had also spotted the great increase in rain-forming nuclei.

The apparent world-wide increase, he says, "agrees strikingly with the dates expected from Dr. Bowen's meteoritic hypothesis and would seem to confirm it."

Dr. Bowen is director of the Radiophysics laboratory of the Commonwealth Scientific and Industrial Research Organization, Sydney, Australia. He suggested early in 1954 that, 29 or 30 days after the earth enters a major meteor stream, if rain falls at all, the chances are extremely good that the rainfall will be heavy.

The Geminid meteor shower occurs from Dec. 10 to 13. Numerous "shooting stars" can be seen on these nights, appearing to radiate from the constellation of Gemini, the twins. About a month is needed for the particles to reach cloud height.

Science News Letter, July 30, 1955

• RADIO

Saturday, August 6, 1955, 5:00-5:15 p.m. EDT

"Adventures in Science" with Watson Davis, director of Science Service, over the CBS Radio Network. Check your local CBS station.

Mr. Davis will discuss the forthcoming International Conference on the Peaceful Uses of Atomic Energy to be held in Geneva.

SURGERY

Heart Operation May Help Sufferers

➤ A HEART OPERATION that may prove to be the first successful operation of its kind was reported in the *Journal of American Medical Association* (July 16) by Drs. William Likoff and Charles P. Bailey.

A myocardial aneurysm, which may result when a blood clot blocks a coronary blood vessel, was removed from a 56-year-old man on April 15, 1954, at Hahnemann Hospital, Philadelphia.

The operation meant removal of the sac from the heart's left ventricle. The patient recovered with little difficulty, the doctors reported, and after several weeks was able to walk and climb stairs without shortness of breath, pain or galloping heart beat—all present before the operation.

Long survival for those afflicted with the heart defect is possible, the doctors said, but "extremely unlikely." This successful operation may mean relief for patients now suffering from this type of aneurysm.

Science News Letter, July 30, 1955

MEDICINE

Babies Can Have Peptic Ulcer, Too

➤ WORRIED BUSINESS MEN are not alone in being subject to peptic, or stomach, ulcers.

Babies can have them, too.

There are about 50,000 undiagnosed cases of gastric ulcer among children between one and six years old, the *Journal of the American Medical Association* (July 16) reported editorially.

Ulcers in babies may be severe, the editorial pointed out; hemorrhage, acute perforation and shock may occur so rapidly that the baby dies before diagnosis can be made or treatment begun.

When an older child has abdominal pain, nausea, vomiting or loss of appetite, the physician should consider the possibility of peptic ulcer. When babies become feeding problems, the same possibility should be investigated.

Although peptic ulcers probably are uncommon in children, the small number of such cases reported is most likely due to the failure of the physician to recognize the condition.

A child's peptic ulcer may be confused with abdominal migraine, food allergy or other intestinal conditions. The pain's location does not help the doctor in his diagnosis, but X-ray findings are useful.

Science News Letter, July 30, 1955