

RADIO

Radio That Rings a Bell To Call Forest Firemen

FOREST rangers on the lookout for fires may now call each other via a new radio bell-ringing device as easily as Mrs. Jones calls Mrs. Smith on the telephone.

Developed for use with a semi-portable short wave outfit, it makes it possible for a ranger to step away from the set itself to attend to other duties, and yet be within call. It can also be used to wake a ranger during the night, if trouble develops. A series of code signals are possible when several stations are included in any one Forest Service network.

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EXPLORATION

Lost Russian Lindbergh May Some Day Come Back

RUSSIA's Lindbergh, Sigmund Levan-evsky, and five companions, last heard from Aug. 13, 1937, while on a flight from Moscow to the United States, may still be alive and may some day walk out of the Arctic to the astonishment of an unbelieving world.

If it happens, it will occur before 1943, for ice upon which they may still be drifting will reach open water and melt by then. The chances against such an escape are high—a hundred to one—but are not prohibitive, Vilhjalmur Stefansson, dean of Polar explorers, still believes.

It has happened before and can happen again, Mr. Stefansson declares in a new book, *Unsolved Mysteries of the Arctic*, (Macmillan). Even so, the Russian government was right in abandoning the search, he says.

Major Andrée and his last surviving companion on the ill-fated balloon expedition that set out to drift to the North Pole in 1897 probably died of carbon monoxide poisoning from their kerosene stove and not by freezing as more commonly believed, the Arctic veteran declares in his analysis of five major mysteries of the Far North.

The first colony of Europeans in the New World, Greenland, 9,000 strong at its height, disappeared through intermarriage with Eskimos and not through extermination by disease, hostile natives or lack of suitable European food, he states in raking up the question of what ever became of a democratic republic

that thrived for some 270 years five centuries ago.

The fate of Thomas Simpson, probable discoverer of the Northwest Passage to the Pacific, in the search for which dozens of expeditions set out in the very earliest days of New World exploration, is solved in the book in fashion reminiscent not only of the man who knows his northland but might serve as a Scotland Yard sleuth as well. The famous Englishman was murdered by vengeful half-breeds, Mr. Stefansson thinks.

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PUBLIC HEALTH

Smallpox Rears Its Ugly Head—But Why?

OUT in the Middle West, smallpox is rearing its ugly head and according to reports a number of citizens are alarmed. In Indianapolis, for example, 97 cases were reported in one week of January, and the city was averaging 40 cases a week during the first weeks of this year.

Other middlewestern communities have had a high smallpox incidence for a number of years. In the nation as a whole there were 11,673 cases with 30 deaths in 1937. In 1938 there were 14,015 cases according to incomplete reports so far available to the U. S. Public Health Service.

Fortunately, the cases are mild and perhaps that is why there is not more concern over the situation. The situation would not have to exist, however, because there is a sure way to avoid smallpox. That way is to be vaccinated against it.

An outbreak, even a small outbreak, of infantile paralysis or influenza or scarlet fever or most any other communicable disease arouses a great popular demand for protection. Physicians, medical researchers and health authorities are implored to find some way of "vaccinating" the population against the dreaded threat to health and life. Yet the very people who clamor for a "shot in the arm" of some potent, protective substance often refuse, for themselves and their children, the oldest and surest disease preventive of them all—smallpox vaccination.

The medical scientists who are trying hard to find more such preventives of disease must surely be discouraged, when they consider the smallpox vaccination situation. Here is something that is safe, simple and sure, just what they are asked to provide, and large numbers of people will have none of it.

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IN SCIENCE

GENERAL SCIENCE

Committee to Investigate Dismissal of Professor

THE AMERICAN Association of University Professors has appointed a committee to investigate the dismissal of Dr. Moyer Springer Fleisher, head of the bacteriology department of St. Louis University School of Medicine.

Dr. Fleisher was dismissed, the Rev. Harry B. Crimmins, president of the University, has declared, because of his sponsorship, along with several other persons, of a lecture on the Spanish war given by a former Catholic priest and because of his interest in the North American Medical Bureau to Aid Spanish Democracy.

Chairman of the investigating committee is Prof. Ernest W. Putpkammer, professor of law at the University of Chicago. The other members are: Prof. James P. Simonds, professor of pathology at Northwestern University Medical School, and Prof. Helen C. White of the University of Wisconsin. The committee is expected to have its report ready within about a month.

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ENGINEERING

Now Electric Ear Controls Grinding Mill

A NEW use for a microphone and electrical circuit, which makes the roar of a grinding mill regulate the flow of material into the mill, was described at the meeting of the American Institute of Mining and Metallurgical Engineers in New York City.

The device, known as an electric ear, makes the minerals feed into the crusher mill more rapidly if the mill is making too much noise. And if the mill is running too silently the device knows that it is feeding too rapidly and shuts down the intake of uncrushed materials. Just enough material is provided, at all times to give the highest efficiency.

The control of mill operations by the sound produced was described by Harlowe Hardinge of the Hardinge Company, York, Pa.

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FIELDS

GENERAL SCIENCE

Science World Interpreted For Knox College Students

THE WORLD as seen through the eyes of modern science is being interpreted for students of Knox College, Galesburg, Ill., by Watson Davis, director of Science Service, as guest lecturer on the William Lincoln Honnold Foundation, for three weeks beginning on February 20.

Among Honnold lecturers of past years at Knox have been Christopher Morley, Will Irwin, Louis Untermeyer and Ida M. Tarbell.

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CHEMISTRY

Nylon First Real Synthetic Fiber Made by Man

THE new chemical, nylon, which can be fashioned into silk-like fibers that make beautiful and amazingly tough stockings, is the first truly synthetic fiber which man has ever created.

But, you will ask, aren't rayon and this new wool-like fiber made out of cow's milk also synthetic fibers?

Chemists will answer, however, that of all the present-day fibers created by man and which do not occur naturally in nature, nylon is the only one which is strictly synthesized by science.

Rayon has as its basic material the cellulose of trees or of cotton. What the chemist does is to reconstitute the cellulose into a fiber material. The chemist is making a chemical fiber when he makes rayon.

Similarly the new lanital "wool" of Italy, made out of the casein of milk, is really a chemical rearrangement of the protein occurring in the casein.

Glass, metal and asbestos fibers can be called physical fibers because they contain some original mineral material whose shape and, in some cases even appearance, have been altered by physical means.

In the creation of nylon chemistry has started out with coal, air and water and built up, by an intricate process, a material that can be spun into fibers finer than silk, stronger and more elastic than silk.

Hose of nylon will not be on the market for a year to come but already a few

experimental pairs have passed astounding tests. In one case a girl wore a pair of these hose for 20 days with sandles and walked in beach sand. At the end of that time the stockings showed no appreciable wear to this harsh abrasive action. Try that with any other hosiery fiber—natural and artificial—and see how quickly the gritty sand cuts through the fiber.

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ARCHAEOLOGY

Study Half-Way Point In Ancient American Axis

THE heaviest loot that Spanish conquerors took from Indians in the New World did not come from any city or hoard within the Incan Empire. It came from Indian cemeteries farther north, in Colombia near Panama.

Describing a recent archaeological survey of this once-flourishing Indian region, Dr. Herbert J. Spinden of the Brooklyn Museum says that this was the first part of the South American continent to feel the impact of European contact. Three little kingdoms—or queen-dom, as he thinks they might better be called—occupied the lands near the Sinu river. Since two of the governments had queens, and since women were delightfully and smilingly portrayed on pottery art objects, he suspects the culture of Sinu may have been luxurious and ultra-feminine.

At any rate, by 1530 Spanish armies had dug up most of the cemeteries for the golden articles in them, and had left for archaeologists a badly wrecked "buried history" of the region.

Yet Colombia cannot be given up as an archaeological puzzle, because of its importance in America's past. Dr. Spinden points out that it was the half-way point between the high civilizations of Indians in Mexico and Peru. Along a north-south axis, by way of mountain roads, flowed an interchange of Indian ideas.

Archaeologists, who used to despair of ever finding out what connection, if any, there was between Mexican Indians and Incas, now have visible evidence from various researches. Dr. Spinden cites definite examples showing that important art and metallurgical techniques passed from central Mexico to central Peru. And along the same mountain route, he adds, flowed such cultural ideas as the Sky God as a jaguar, the sun as a disk containing the face of this jaguar god with serpent rays, the humanization of eagles.

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GENERAL SCIENCE

Interest in Science Distinguished Late Pope

THE LATE Pope Pius XI was recognized by the world of science as a friend and his passing is sincerely regretted by scientists of all creeds and opinions. He showed his interest in science in three major ways:

His recent protests against suppression of freedom in dictator countries, some of them written while he was in seriously bad health, included a defense of scientific freedom along with his championship of religious and social liberty.

One of the first acts of his reign was a thorough modernization of the Vatican Library, which made available many old manuscripts and books of great importance in the history of science.

In 1936 he re-established the Pontifical Academy of Sciences, including in the first list of new members the names of six American leaders in research: Prof. George D. Birkhoff of Harvard University, Dr. Alexis Carrel of the Rockefeller Institute, Profs. Robert A. Millikan and Thomas H. Morgan of the California Institute of Technology, Prof. Hugh S. Taylor of Princeton University, and Prof. George S. Sperti of the Institutum Divi Thomae in Cincinnati.

Pius XI was the first pope to ride in an automobile in the Vatican gardens, and the first to broadcast his voice over the radio. He was a close friend of the late Senator Marconi, wireless pioneer, and the Vatican radio station was installed under Marconi's direction.

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GENETICS

Quadruplets Fairly Common But All Rarely Survive

THE BIRTH of quadruplets may be an exciting event to the family concerned, but medical statistics show that they are relatively common. They occur once in every 512,000 births. It is extremely rare, however, for all four to survive to adulthood. The Keys quadruplets of Oklahoma, all girls, are notable exceptions.

Even commoner are triplets and twins, the former occurring about once in 6,400 births and the latter once in 80 births. An easily remembered mathematical ratio for the occurrence of these multiple births is the following: twins, 1:80¹; triplets, 1:180²; quadruplets, 1:80³.

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