

• New Machines and Gadgets •

⚙️ A "memory" device which retains the image of an electric flash long enough for it to be photographed (1/25 second) has been developed to study unpredictable flashes or surges on electrical equipment. A film of fluorescent mineral briefly holds the image of what is happening as transmitted by a small beam of electrons. In much the same way, the human eye retains momentarily the image transmitted by light rays until the nerve system relays it to the brain.

Science News Letter, January 9, 1943

⚙️ THE TINY gadget which the Army Air Corps sergeant is shown examining in the picture, is an automatic device that operates the built-in fire extinguishing system aboard U. S. bombing planes in case of crash landing. A carefully balanced electrical trigger discharges



carbon dioxide into the engine compartments and prevents the fires which usually follow a crash.

Science News Letter, January 9, 1943

⚙️ A MOBILE "blitz buggy" carries equipment for emergency pumping, decontamination and purification of water. In case of air raids, it can provide water for either drinking or fire fighting. The chemical chamber is made of a crystal-clear plastic, light in weight, virtually unbreakable and transparent, which allows the operator to keep a constant check on the chlorine or other chemical being used to purify the water.

Science News Letter, January 9, 1943

⚙️ SYNTHETIC white sapphires are now being produced here to satisfy the war demands of all the United Nations. They replace the synthetic gems formerly imported from abroad. White synthetic sapphires are crystal-clear pure aluminum oxide, also called corundum. It is next to the diamond in hardness. Production has been allocated for essential industrial and military uses, such as jewel bearings of chronometers, compasses, and electrical, fire-control, or aircraft instruments. They are also being tested as thread guides in textile mills, as orifices for flow meters, and for many other uses.

Science News Letter, January 9, 1943

⚙️ NEW PLASTIC jar rings recently developed are applicable for both home and commercial canning of foods. The jar-closures have stood up under tests by the Department of Agriculture and

responsible packers, the manufacturer reports. The necessary raw materials are available in unlimited quantities at the present time.

Science News Letter, January 9, 1943

⚙️ A NEW drink mixer automatically starts when the mixing vessel is in position and stops after a specified period of mixing. The drink container is then automatically lowered and the mixing element continues to rotate for a short time, thus reducing drippage. Controls are provided for regulating both the speed and length of mixing.

Science News Letter, January 9, 1943

If you want more information on the new things described here, send a three-cent stamp to SCIENCE NEWS LETTER, 1719 N St., N. W., Washington, D. C., and ask for Gadget Bulletin 138.

Books of the Week

AMERICA FLEDGES WINGS—The History of the Daniel Guggenheim Fund for the Promotion of Aeronautics — Reginald M. Cleveland—Pitman, 224 p., illus., \$2.50.

ATOMS, ROCKS AND GALAXIES—A Survey in Physical Science—by John Stuart Allen and others. Harper, 719 p., illus., \$3.75. Revised edition.

FLYING HEALTH—M. Martyn Kafka—Military Publishing Co., 248 p., illus., \$2.

INFANT AND CHILD IN THE CULTURE OF TODAY—Arnold Gesell and Frances L. Ilg—Harper, 399 p., illus., \$4.

LABORATORY DIRECTIONS IN BIOCHEMISTRY—Victor C. Myers—Mosby, 288 p., illus., \$3.50.

"OILINESS" — Arthur W. Burwell — Alox Corp., 92 p., \$5, except to technical men who must apply on company letterhead directly to publisher, and commissioned officers in U. S. Army. Third edition.

SHIP STRUCTURE AND BLUEPRINT READING—H. L. Heed—Cornell Maritime Press—258 p., illus., \$2.50. "This book is written for the sole purpose of teaching the men who are building the ships to read the prints."

THE SPECIFIC HEATS OF CERTAIN GASES OVER WIDE RANGES OF PRESSURES AND TEMPERATURES — Frank O. Ellenwood, Nicholas Kulik, and Norman R. Gay—Cornell Univ. Press—22 p., illus., free upon direct application to Engineering Experiment Station, Cornell Univ.

TECHNIQUE OF PLYWOOD — by Charles Brazer Norris—Laucks, 249 p., illus., tables, diagr., \$2.50. Reprints of series published in "Hardwood Record" from March 1937 to July 1939.

YOUR PERSONALITY AND YOUR JOB—Paul W. Chapman—Science Research Associates—56 p., illus., 60c. American job series. Occupational Monograph 31.

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● RADIO

Saturday, January 16, 1:30 p.m., EWT.

"Adventures in Science," with Watson Davis, director of Science Service, over Columbia Broadcasting System.

Dr. Trendley Bean, of the National Institute of Health, will discuss "Teeth and Tooth Decay." Monday, January 11, 9:15 a.m., EWT; 2:30 p.m., CWT; 9:30 a.m., MWT; and 1:30 p.m., PWT

Science at Work, School of the Air of the Americas over the Columbia Broadcasting System, presented in cooperation with the National Education Association, Science Service and Science Clubs of America.

"Lost Worlds" will be the subject of the program.

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