

# • New Machines and Gadgets •

⚙️ AN ADJUSTABLE SEAT has been designed which will insulate the pilot from vibrations of his plane. Rubber bushing units in the pivotal seat supports are said to insulate both dominant and stray vibration impulses acting in any direction.

Science News Letter, February 6, 1943

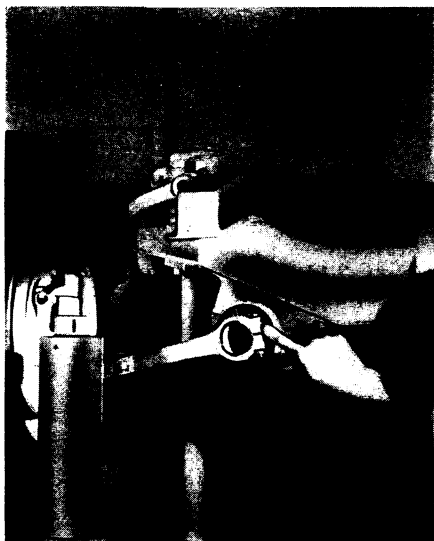
⚙️ A NEW ALARM of especial value during war has been developed to detect fires. Models have been designed for both industrial and home use. The device consists essentially of two metal plates anchored to a plastic holder. A thin "flash" plate is sensitive to small, rapid temperature changes, although seasonal or other slow temperature elevations do not set off the alarm. The other plate is designed to detect smoldering fires to which the "flash" plate would not react. Applications include detection of dangerous heat in dynamos, transformers, and other equipment, the manufacturer states.

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⚙️ A COMBINATION CIGARET container, lighter and dispenser has been patented recently. It is especially adapted for installing in autos. The compact unit can be easily filled and dispenses lighted smokes one at a time.

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⚙️ RUBBER SPRINGS are now being used on U. S. amphibian combat vehicles. The space between a steel cylinder and shaft is filled with rubber, as shown in the picture. Either the shaft or cylin-



der is held in fixed position and the other member connected to the wheels by the arms. Springing is accomplished by the twisting movement in the rubber. Since the spring was originally developed for autos, it is likely that the new device will be a part of postwar cars.

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⚙️ A TOUGH "SKIN" on steel war implements can be produced by electrical induction. This heat treatment hardens certain parts of the drive gear on a tank, for example, while the remainder stays ductile to avoid fracturing.

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⚙️ A WEATHERPROOF 200-watt lamp is guaranteed against cracking, due

to climatic conditions, even when used outdoors in an open fixture.

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⚙️ AN IMPROVED rubber tread for airplane tires gives added traction for icebound landing fields by means of many flexible, finger-like projections which resist side-skidding.

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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 142.

The rapid decline in the death rate from pneumonia in recent years is largely due to the more extensive use of sulfa drugs.

## • Just Off the Press •

THE AIRCREWS' BOOK OF PRACTICAL MATHEMATICS—P. H. Robinson—*Chemical Publishing co.*, 149 p., illus., \$1.50.

BIOLOGY SEASON BY SEASON: For Catholic Schools—Mary Anthony Payne—*American Book co.*, 675 p., illus., \$2.32. Textbook.

CHEMICAL-TECHNICAL DICTIONARY: German-English-French-Russian — A. W. Mayer—*Chemical Publishing co.*, 872 p., \$8. Translation under the direction of B. N. Menshutkin and M. A. Bloch.

DOWN-EAST SPIRITUALS AND OTHERS — collected and edited by George Pullen Jackson—*Augustin*—296 p., illus., \$5.50. "300 songs supplementary to the author's Spiritual Folk-songs of early America."

ELEMENTS OF MINERALOGY: Emphasizing the Variations in Minerals — Alexander Newton Winchell—*Prentice-Hall*, 535 p., illus., \$5.

HANDBOOK OF MICROSCOPIC CHARACTERISTICS OF TISSUES AND ORGANS—Karl A. Stiles—*Blakiston*, 204 p., illus., \$1.50, 2d ed.

THE JAPANESE—John F. Embree—*Smithsonian Institution*, 42 p., illus., Free upon direct application to Smithsonian (Smithsonian Institution War Background Studies Number Seven).

A MANUAL OF MATHEMATICS FOR PROSPECTIVE AIR CORPS CADETS — C. V. Newson and Harold D. Larsen—*University of New Mexico press*, 105 p., illus., paper ed., \$1.35; cloth, \$1.55.

MAN'S PHYSICAL UNIVERSE: A Survey of Physical Science for Colleges—Arthur T. Bawden—New York, *Macmillan*, \$4.

MIRACLES OF MILITARY MEDICINE—Albert Q. Maisel—*Duell, Sloan and Pearce*—373 p., \$2.75.

NAVAL WARFARE: An Introductory Study

— John Creswell — *Chemical Publishing co.*, 302 p., maps, \$4. 2d revised edition.

NUTRITION AND FOOD SUPPLY: THE WAR AND AFTER—John D. Black, editor—*American Academy of Political and Social Science*—279 p., \$2, paper; \$2.50, cloth. (The Annals of the American Academy of Political and Social Science, Volume 225).

THE OBSERVER'S BOOK ON ASTRO-NAVIGATION—Francis Chichester—*Chemical Publishing co.*, 84 p., illus., \$1.50. Parts 3 and 4.

THE OBSERVER'S HANDBOOK ON AIRCRAFT INSTRUMENTS—W. J. D. Allan—*Chemical Publishing co.*, 102 p., illus., \$1.50.

ORGANIC CHEMISTRY—G. Albert Hill and Louise Kelley—*Blakiston*—919 p., illus., \$4. Textbook.

THE PSYCHOLOGY OF MILITARY LEADERSHIP — L. A. Pennington, Romeyn B. Hough, Jr., and H. W. Case—*Prentice-Hall*, 288 p., \$2.95.

SAVE FUEL FOR VICTORY — University of Illinois Engineering Experiment Station — *University of Illinois*—35 p., 25c. (University of Illinois Engineering Experiment Station Circular Series No. 47).

THE STARS IN MYTH AND FACT—Oral E. Scott—*Caxton Printers*, 374 p., illus., \$3.

TEXTILES—William H. Dooley—*Heath*, 790 p., illus., \$4. New edition.

UPPER CRETACEOUS FLORAS OF THE ROCKY MOUNTAIN REGION—Erling Dorf—*Carnegie Institution*—168 p., 36 plates, \$2.50; paper cover, \$3.00, cloth binding. (Contributions to Paleontology).

YOUR HOUSE: Its Upkeep and Rejuvenation — J. Harold Hawkins—*Barrows*, 224 p., illus., \$2.50.

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