

earth's bounties, distributed as equitably as possible among all men. Thus shall we achieve inner peace, and move toward peace within the state and among nations.

St. Francis of Assisi, who was a man of good will if the world ever saw one, understood this perhaps better than his biographers, contemporary or modern, have realized. His talks to birds and fishes and lone wandering wolves, his nailing of fire as brother and water as sister, were not mere pious sentimentalizings. By the swift intuition which often enables poets to arrive at natural truths without the labor of slow learning, he perceived the intimacy of man's relation as a creature to all other creatures, and so swept them all up into the wide embrace of his good will.

*Science News Letter, December 25, 1943*

## INVENTION

## Slot Machine Nickels Sorted by Conductivity

► "HOT" MONEY is good money when subjected to the test imposed by a device for slot machines on which Fred E. A. Wallin of University City, Mo., received patent No. 2,335,369. It makes the inserted nickel into part of a thermocouple, which passes more or less current according to the conductivity of the coin in contact with an electrically heated pin.

The nickel alloy in the American five-cent piece has very high conductivity, the almost pure nickel in the corresponding Canadian coin nearly as much. Slugs and spurious coins are far less conductive. Differences in volume of current passed determine whether the coin is accepted or shunted into the rejection chute. The machine can be set to accept both American and Canadian nickels, or American nickels only; in any case it turns down all imitations as being too "cold."

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## ENGINEERING

## Opportunities for Women Seen in Civil Engineering

► CIVIL engineering, which has to do with the construction of buildings, bridges, roads, etc., is a field women are not rushing into these war days. Yet Prof. Ray C. Brumfield of the Cooper Union Engineering School believes that there will be a serious shortage of such engineers in the future and that women are overlooking opportunities.

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# Books Off the Press

- CHEMICAL PROCESS PRINCIPLES: Part One; Material and Energy Balances**—Olaf A. Hougen and Kenneth M. Watson—*Wiley*, 452 p., illus., \$4.50. A detailed discussion of procedures for estimating vapor pressures, critical constants, and heats of vaporization; new methods for dealing with equilibrium problems in extraction, adsorption, dissolution and crystallization.
- COVERTS AND CASTS: Field Sports and Angling in Words and Pictures**—William J. Schaldach—*A. S. Barnes*, 138 p., illus., \$5.
- DEAFNESS AND THE DEAF IN THE UNITED STATES: Considered Primarily in Relation to Those Sometimes More or Less erroneously Known as "Deaf-Mutes"**—Harry Best—*Macmillan*, 675 p., \$6.50. A comprehensive authoritative book, including medical, organizational and educational aspects.
- GEOMETRY: WITH MILITARY AND NAVAL APPLICATIONS**—Willis F. Kern and James R. Bland—*Wiley*, 152 p., illus., \$1.75.
- INDUSTRIAL CHEMISTRY**—William Thornton Read—*Wiley*, 631 p., illus., \$5. This is a third edition of a successful text.
- AN INTRODUCTION TO POLLEN ANALYSIS**—G. Erdtman—*Chronica Botanica*, 239 p., illus., \$5.
- MAINTENANCE ARC WELDING**—A. F. Davis and Ed. C. Powers, eds. *James F. Lincoln Arc Welding Found.*, 234 p., illus., 50c.
- MODERN AIRFIELD: Planning and Concealment**—Merrill E. De Longe—*Pitman*, 167 p., illus., \$4.
- OIL INDUSTRY AND TRANSPORTATION: Prewar and Postwar**—P. Harvey Middleton—*Railway Business Assn.*, 60 p., 50c., paper.
- PRINCIPLES AND PRACTICE OF REHABILITATION**—John Eisele Davis—*A. S. Barnes*, 211 p., \$3.
- THE RAFT BOOK: Lore Of The Sea And Sky**—Harold Gatty—*George Grady Press*, 152 p., illus., \$3.25. With this book and enclosed charts, no instruments other than a stick and a piece of string, and no previous knowledge of navigation, persons who find themselves in small boats or rafts anywhere in any ocean or sea in the world can find their way to land.
- STATISTICAL ABSTRACT OF THE UNITED STATES 1942**—comp. by Morris H. Hansen—*Gov. Print. Off.*, 1,097 p., \$1.75.
- THE STORY OF PAINTING: From Cave Pictures to Modern Art**—Thomas Craven—*Simon and Schuster*, 254 p., illus., \$5.
- SYNTHETIC RESINS AND RUBBERS**—Paul O. Powers—*Wiley*, 296 p., illus., \$3. The chemistry of synthetic resinous materials and the raw materials from which they are made. Covers: theories of polymer formation, condensation, polymers, vinyl polymers, synthetic rubbers, resins from natural products, application of synthetic resins.
- THE TEN COMMANDMENTS: Ten Short Novels of Hitler's War Against the Moral Code**—Armin L. Robinson, ed.—*Simon and Schuster*, 488 p., \$3. Fiction by a number of prominent authors.
- TOMORROW WE FLY**—William B. Stout and Franklin M. Reck—*Crowell*, 160 p., illus., \$2.
- WORLD ECONOMICS**—Lewis L. Lorwin, ed.—*Institute of World Economics*, 100 p., paper, Nos. 3-4. This issue with next volume, \$5.

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