

- with special emphasis on the origin and development of the U. S. Marine Hospital Service.
- MEDICAL JURISPRUDENCE AND TOXICOLOGY**—John Glaister—*Williams and Wilkins*, 9th ed., 755 p., illus., \$7.00. A basic reference brought up-to-date. Of British origin.
- THE MICROTOMIST'S VADE-MECUM (Bolles Lee):** A Handbook of the Methods of Animal and Plant Microscopic Technique—J. Bronte Gatenby and H. W. Beams, Eds.—*Blakiston*, 11th ed., 753 p., illus., \$8.50.
- NOTES ON SOME ASIATIC NUTHATCHES AND CREEPERS**—Charles Vaurie—*American Museum of Natural History*, 39 p., illus., paper, 25 cents. A report on these birds collected by Dr. Koelz in Iran, Afghanistan and India.
- NOTES ON THE CUTTHROAT AND RAINBOW TROUTS WITH THE DESCRIPTION OF A NEW SPECIES FROM THE GILA RIVER, NEW MEXICO**—Robert Rush Miller—*University of Michigan Press*, 42 p., illus., paper, 50 cents.
- PERSONALITY AND PSYCHOTHERAPY:** An analysis in Terms of Learning, Thinking, and Culture—John Dollard and Neal E. Miller—*McGraw-Hill*, 488 p., illus., \$6.50. Hypotheses to explain what happens in psychotherapy in terms of behavior theory.
- PRINCIPLES OF INTENSIVE PSYCHOTHERAPY**—Frieda Fromm-Reichmann—*University of Chicago Press*, 245 p., \$3.75. Formulated on the basis of the application of Freud's concepts and Sullivan's operational interpersonal relations.
- RATES AND AMOUNTS OF RUNOFF FOR THE BLACKLANDS OF TEXAS**—Ralph W. Baird and William D. Potter—*Gov't. Printing Office*, U. S. Dept. of Ag. Tech. Bull. No. 1022, 23 p., illus., paper, 10 cents.
- SAFETY IN THE MINING INDUSTRY**—D. Harrington, J. H. East, Jr. and R. G. Warneke—*Gov't. Printing Office*, Dept. of Mines Inf. Circ. 7485, 157 p., illus., paper, 40 cents. A statistical study.
- THE SEA AND ITS MYSTERIES**—John S. Colman—*Norton*, 261 p., illus., \$3.75. An introduction to the science of the sea. The geography of the ocean floor, the chemistry of the sea and the circulation of the water, currents, waves and tides are discussed.
- SEVEN SCIENCE FICTION NOVELS OF H. G. WELLS**—*Dover*, 1013 p., \$3.95. Among the novels included are *The First Men in the Moon*, *The Invisible Man*, and *The Time Machine*.
- SEX AND TEMPERAMENT IN THREE PRIMITIVE SOCIETIES**—Margaret Mead—*New American Library*, 218 p., paper, 35 cents. A pocket book edition of a work appearing in 1935.
- SIR THOMAS BROWNE: A Doctor's Life of Science and Faith**—Jeremiah S. Finch—*Schuman*, 319 p., illus., \$3.50. A biography of a famous 17th century doctor.
- SNOW MELTING: Design, Installation and Control of Systems for Melting Snow by Hot Water Coils Embedded Beneath Walks, Roads, or Other Areas Where Snow is an Obstruction or Hazard**—T. Napier Adlam—*Industrial Press*, 224 p., illus., \$4.50.
- SPIDERS OF THE RHOICININAE (PISAURIDAE) FROM WESTERN PERU AND ECUADOR**—Harriet Exline—*American Museum of Natural History*, 13 p., illus., paper, 25 cents.
- STEROID HORMONES AND TUMORS: Tumorigenic and Anti-tumorigenic Actions of Steroid Hormones and the Steroid Homeostasis Experi-**

mental Aspects—Alexander Lipschutz—*Williams and Wilkins*, 309 p., illus., \$6.00. A study on how steroids may interfere in the dynamics of cancer.

TOOL ENGINEERING: Analysis and Procedure—Lawrence E. Doyle—*Prentice-Hall*, 499 p., illus., \$6.35.

ULTRAHIGH FREQUENCY ENGINEERING—Thomas L. Martin, Jr.—*Prentice-Hall*, 456 p. illus., \$8.00. A college text intended for senior students in electrical engineering or physics.

VIRUSES 1950—M. Delbruck, Ed. *California Institute of Technology*, 147 p., illus., \$2.50. Proceedings of a conference on the similarities and dissimilarities between viruses attacking animals, plants and bacteria, respectively. Held at the California Institute of Technology, March 20-22, 1950.

Science News Letter, November 18, 1950

ENGINEERING

Devise New Technique For Measuring Paint

► **THE THICKNESS** of paint and varnish coatings and how rust and tarnish form on metals are among the subjects being studied with new techniques described at a special symposium of the New York Academy of Sciences.

Dr. Jean-Jacques Trillat, director of the X-ray and Electronics Laboratory of the French National Scientific Research Center, described these new methods as well as a new apparatus devised to help in the measurement of coating thicknesses.

Use of X-rays and photoelectrons (charged particles thrown out from a surface by the action of light or other radiation) to study the surfaces of metals, alloys and minerals is one of the techniques. Another method is to use X-rays to analyze thin surface film on paper and biological objects. Still another method is to use X-rays that have been diffracted, or changed from their original path, to study corrosion and lubrication.

The new apparatus measures the angles between X-rays and the films at which the X-rays are directed. From them can be calculated the thickness of such substances as paint and varnish. The method also can be used to study the oxidation, or rusting, process; to identify alloys and to learn about the effects of surface polishing of metals.

Another technique described to the New York Academy of Sciences makes it possible to prepare a metal surface in a vacuum. This surface can then be machined in the vacuum at any desired temperature, thus permitting new research into the study of metal surfaces. It further allows the scientists to distinguish the physico-chemical factors such as adsorption and chemical affinity from the structural factors.

This new method helps laboratory study of the fresh, clean surfaces of solids, of the measurement of surface temperatures, of the results of machining metals and of how rust and tarnish form.

Dr. Trillat is a professor at the Sorbonne and an officer of the French Academy.

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ENGINEERING

Want To Aid Europe Without Losing Secrets

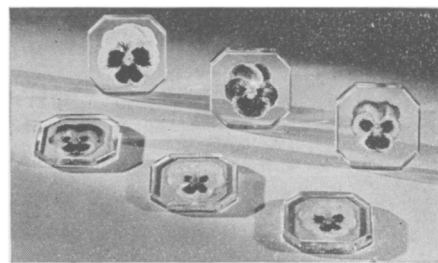
► **ONE KNOTTY** problem today is how to help European industries produce defense materials without handing them patents and "know-how" that can be used in commercial war on the United States.

Acknowledging that arming of the North Atlantic Treaty countries has been delayed by reluctance of U. S. industry to export their industrial and technological secrets without safeguards, one meeting of industrial and government representatives has been held in Washington.

In some of the countries that would be most helpful in making defense and military equipment, the concerns ready to do so are the world rivals of the American companies producing the needed materials in this country. If hard-won production methods are handed over to their European rivals, the American companies are fearful that their own know-how will be used to compete with them commercially as well as to equip the fighting forces.

Writing into governmental and commercial agreements safeguards to prevent abuses is being discussed further.

Science News Letter, November 18, 1950



REAL PANSY COASTERS

Made by embedding real pansies in Castolite, a new liquid casting plastic. Students can embed real flowers, butterflies, shells, photos, etc., to make interesting paper weights, coasters, jewelry, buttons, trays and many other distinctive objects. Use home tools.

Stimulates Student Interest Says Danville, Ky., Teacher

A Danville, Kentucky teacher writes: "Castolite has served a dual purpose in my class room. The children used it to preserve specimens of butterflies and wild flowers which had been collected as a science project. As a part of the functional art program, the more beautiful specimens were used to make paper weights and coasters. The unique process of preserving the science specimens was very fascinating to the pupils. It was an added stimulus to their work."—Mary Ann Kavanaugh, Teacher, Maple Avenue School, Danville, Ky.

FREE FOLDER on Request

Our new "Liquid Magic" folder is fully illustrated in colors and shows the possibilities of this amazing material for class and hobby use. The idea is especially timely now, because Castolite creations make unusual Christmas gifts. "Liquid Magic" is FREE. Send a card or note of request to:

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