

TOBACCO AND AMERICANS—Robert K. Heilmann—*McGraw*, 276 p., 300 illus., \$7.50. Historical picture book relating the story of the growth of the tobacco custom, tobacco manufacture and trade from the days of Columbus to 1958, when sales of tobacco products approximated \$6.5 billion.

TRANSFORMERS AND GENERATORS FOR POWER SYSTEMS: Their Behavior, Capabilities and Rating—R. Langlois-Berthelot, trans. and rev. by H. M. Clarke, foreword by Charles F. Wagner—*Philosophical Lib.*, 541 p., \$12. For the engineering student who has general knowledge of physics, for the engineer concerned with design and manufacture and for the operating engineer.

UNITED STATES GOVERNMENT ORGANIZATION MANUAL 1960-61—Office of the Federal Register (GPO), 817 p., paper, \$1.50. Revised as of June 1, 1960, manual is divided into legislative, judicial and executive sections, and outlines legislative authority, purpose and functions of each government agency.

WATER AND AGRICULTURE: Symposium, December 1958—Roy D. Hockensmith, Ed.—*Am. Assn. for the Advancement of Science*, 198 p., illus., \$5. Papers by recognized authorities on programs and prospects of water management for the future; water sources, water planning and uses; and evaporation control.

WEATHER FORECASTING FOR AERONAUTICS—Joseph J. George and others—*Academic*, 673 p., maps, \$15. Methods for practical application of the fundamentals of the science of meteorology, based on research and development performed in the Eastern Air Lines meteorological laboratory, and tested in day-to-day forecasting practice.

X-RAY POWDER PHOTOGRAPHY: In Inorganic Chemistry—R. W. M. D'Eye and E. Wait—*Academic*, 222 p., illus., \$8.50. Written primarily for the research chemist with no experience of crystallography, giving the necessary background for understanding the powder method of observing X-ray diffraction in the laboratory.

• Science News Letter, 78:76 July 30, 1960

ANTHROPOLOGY

Ancient Rome Forbade Downtown Traffic in Day

ANCIENT ROME had its traffic problems, too, and used some of the same techniques being tried in our big cities today to solve their problems.

Rome's narrow streets were not marked "One Way" but in effect they were, because each driver sent a runner ahead to hold up traffic at the other end of the street or alley until the chariot had passed through.

The fringe parking plan used in modern large cities to relieve the downtown parking problem was used in Rome in the days of Julius Caesar. In the Roman day there were 12 hours of "daylight" adjusted according to the season. Private vehicles were forbidden on the city streets from dawn until two hours before dark. A traveler coming to Rome had to park his carriage at the city gates and continue into town either on foot or in a carrying chair or litter.

Traffic officers in ancient Rome belonged to a corps originally organized to guard against fires. They were officially known as Vigiles, but popularly called the "little bucket fellows." Most traffic restrictions and regulations were lifted at sundown, but the Vigiles handled the situation when two wagon drivers would get into a noisy

dispute about the right of way. The police-firemen in Rome were freed slaves, Kenneth D. Matthews Jr., of the University of Pennsylvania's Museum, reports in *Expedition*, 2:22, 1960.

Women drivers were not a problem in ancient Rome. In the third century B. C. a law was passed forbidding women to ride in carriages. Twenty years later the ladies of Rome forced the repeal of this law but during the first century A.D. the restriction was again in force.

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TECHNOLOGY

Automated Equipment In Nuclear Industry

ONE OF THE FIRST applications of automated equipment in the atomic power equipment industry is being made by General Electric Co. New tape-controlled machines, installed at San Jose, Calif., will cut costs sharply and are expected to maintain high standards of quality control. Automated machinery has recently come into use by suppliers of components to the nuclear industry, but until now the industry itself had made only limited attempts to automate.

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PHYSIOLOGY

Stressful Space Chamber Tests Human Endurance

A STRESS CHAMBER nearing completion will simulate six hazards of space travel: noise, intense light, vibration, changes in barometric pressure and variations of temperature and the composition of various gases.

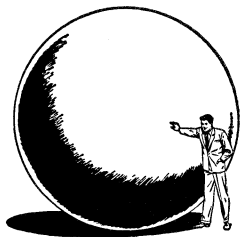
The test chamber, being set up by the Boeing Airplane Company in Seattle, Wash., will permit tests of human capability to withstand stresses in combination.

As a "pilot" sits performing tasks, such as identifying simulated targets on a radar screen, he may be subjected to the chamber's walls being heated to 400 degrees, air pressure changing with altitude, piped-in noise simulating blast-off and other stresses.

The chamber may be used for the Dyna Soar manned space glider program or to simulate conditions in moon stations and underground launch stations.

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ASTRONOMY

Dimmest White Dwarf Star Discovered

THE DIMMEST WHITE DWARF STAR yet discovered has been found by Dr. W. L. Luyten of the University of Minnesota.

White dwarf stars are super-dense objects having about the same amount of matter as the sun packed into the volume of a planet. They are very faint, blue-white stars with a natural brightness only about a thousandth that of the sun. White dwarfs are believed to be the final state of a star, when it has settled down to shine feebly.

Dr. Luyten reported to Harvard College Observatory that LP 321-98, as the star is called, is "probably the least luminous white dwarf now known." The star was among 20 of this class recently discovered by Dr. Luyten.

Also reported by Harvard College Observatory is discovery of a fast-moving object visible from the Southern Hemisphere.

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