• Books of the Week •

APPROVED LABORATORY TECHNIC: Clinical Pathological, Bacteriological, Mycological, Virological, Parasitological, Serological, Biochemical, and Histological—John A. Kolmer and Fred Boerner—*D. Appleton-Century,* 1017 p., illus., and tables, $10, 4th ed.

ARCHITECTURAL DRAWING AND DETAILING—J. Ralph Dalzell and James McKinney—*American Technical Soc.,* 212 p., diagrs. and tables, $2.50, rev. ed. The general principles and techniques of architectural drawing, detailing, rendering in pen and ink, and landscaping.

THE AVIATION ANNUAL OF 1946—Reginald M. Cleveland and Frederick P. Graham, editors—*Doubleday,* 245 p., illus., $4. A consideration of the present situation in aviation and a survey of the possibilities for travel, commerce and protection for peace in the air of tomorrow. Articles by General H. H. Arnold, Fleet Admiral Ernest J. King, Dr. George W. Lewis, and many others.

BRACHIOPODA OF THE INDEPENDENCE SHALE OF IOWA—Merrill A. Stainbrook—*Geological Soc. of America,* 74 p., illus., $1. Geological Society of America, Memoir 14.

COLD STORAGE FOR APPLES AND PEARS—W. V. Hukill and Edwin Smith—*Dept. of Agric.,* 61 p., illus. and tables, 15 cents. The response of fruit to storage conditions, cold storage plants and equipment, and tables of the average freezing temperatures of fruits and other relevant data.

DR. MORTON: Pioneer in the Use of Ether—Rachel Baker—*Julian Messner,* 224 p., illus., $2.50. The biography of a man who took as his mission the alleviation of pain.

DOCTORS, DRUGS AND STEEL—Edward Podolsky, M.D.—*Ackerman,* 384 p., illus., $3.75. The story of penicillin, the sulfa drugs, hormones, and other recent medical discoveries destined to lengthen man's life span.

ELEMENTARY APPLIED AERODYNAMICS—Paul E. Hemke—*Prentice-Hall,* 231 p., diagrs. and tables, $4.35. A textbook designed to meet the requirements of a first course in technical applied aerodynamics, and presupposing preliminary training in mathematics, physics and mechanics.

THE JOURNAL OF FREQUENCY MODULATION—Harold Becker, Managing Editor—*Telecasting Publications, Inc.,* Monthly, $3 a year. First issue of a new Journal.

ONE WORLD OR NONE—Dexter Masters and Katharine Way, editors—*McGraw,* 79 p., diagrs., $1. Reports to the public on the full meaning of the atomic bomb by Albert Einstein, Irving Langmuir, Harlow Shapley, Walter Lippmann, and others.

OUR WORLD CHANGES—Samuel Ralph Powers, Elsie Flint Neuner, Herbert Bascom Bruner, and John Hodgdon Bradley—*Ginn,* 584 p., illus. and tables, $1.68, new edition. Studies in natural science for grades seven, eight, and nine.

PAINT MANUAL: With Particular Reference to Federal Specifications—Percy H. Walker and Eugene F. Hickson—*Dept. of Commerce,* 165 p., illus. and tables, $1. An aid in procuring materials suitable and adequate for most kinds of painting. Methods are described for preparation of surfaces and the application of coatings.

PHYSICAL CONSTANTS OF HYDROCARBONS: Vol. 3, Mononuclear Aromatic Hydrocarbons—Gustav Egloff—*Reinhold,* 661 p., diagrs. and tables, $15. American Chemical Society Monograph Series.

PSYCHOANALYTIC THERAPY: Principles and Application—Franz Alexander, M.D., and Thomas M. French, M.D., with Staff Members of the Institute of Psychoanalysis, Chicago—*Ronald Press,* 353 p., $5. The results of an investigative work which represents a concerted effort to define those basic principles which make possible a more efficient means of psychotherapy and to develop specific techniques of treatment.

PSYCHOLOGY FOR NURSES: Designed and Written for Student Nurses—Bess V. Cunningham—*D. Appleton-Century,* 336 p., diagrs. and tables, $3. An introduction to psychological principles which will help the nurse during the critical period of orientation and training as well as in her later professional contacts with associates and patients.

RUBBER IN ENGINEERING: Prepared under the direction of the Controller of Chemical Research of the Ministry of Supply and the Directors of Scientific Research of the Ministry of Aircraft Production and the Admiralty on the Basis of Research Carried out by the Imperial Chemical Industries, Ltd.—*Chemical Pub.,* 267 p., illus. and tables, $5.50. A general survey of the information available on the fundamental properties of rubber.

SIMPLIFIED ARCHITECTURAL DRAWING: With Examples and Graded Problems—Truman C. Buss, Jr.—*American Technical Soc.,* 258 p., diagrs. and illus., $4.75. A book to fill the gap between instruction pertaining to mechanical drawing and that pertaining to architectural design.

SPANISH TRAVEL-AIDE—Victoria Villagomez Macaulay, arranged and edited by George F. Cornwall—*Binfords & Mort,* 174 p., illus., $1.50, rev. ed. A quick approach to the Spanish language; ready-made expressions with phonetics and English equivalents.

STEEL IN THE WAR—Douglas A. Fisher—*U. S. Steel Corp.,* 164 p., illus. and tables, free. The now-it-can-be-told story of an industrial accomplishment which contributed much to the victory of the United Nations in World War II.

TEXTBOOK OF OBSTETRICS: Designed for Use of Students and Practitioners—Henricus J. Stander, M.D.—*D. Appleton-Century,* 1277 p., illus. and diagrs., $10, Stander's 3rd revision. This edition represents the ninth edition of WILLIAMS OBSTETRICS, the first six of which were written by the late Dr. J. Whitridge Williams.

WAR AND PEACE AIMS: Extracts from Statements of United Nations Leaders—*United Nations Information Office,* 176 p., 75 cents. Special Supplement No. 7 to the United Nations Review.

THE WHITEFISH FISHERY OF LAKES HURON AND MICHIGAN WITH SPECIAL REFERENCE TO THE DEEP-TRAP-NET FISHERY—John Van Oosten, Ralph Hile, and Frank Jobes—*Dept. of the Interior,* 394 p., diagrs. and tables, 35 cents. Fishery Bulletin 40.

Science News Letter, March 30, 1946

ASTRONOMY

International Astronomical Station Advocated

➤ CREATION of an international astronomical observatory and research station under UNO was advocated by astronomers of 13 nations, including Russia, Britain and the United States, meeting in Copenhagen for the first session of the International Astronomical Union's executive committee since the war.

The astronomical station would be a strong and many-sided research organization if the proposal introduced by Dr. Harlow Shapley, director of Harvard College Observatory, is brought to fruition.

Dr. Shapley proposed that the United Nations Educational, Scientific and Cultural Organization should consider implementing development of truly international institutes in special fields, such as public health, new foods, astronomy and atomic energy. He argued that scientists set the pattern for friendly active international cooperation.

We should do nothing nationally, he said, that it is possible to do as well or better internationally.

The Polish delegation advocated both North and South Polar International Observatories.

The Soviet delegation reported plans for sending a group of leading Russian astronomers to America soon, preparatory to rebuilding Russian observatories destroyed by war. Dr. A. Mikhailov of Moscow was elected to the International Astronomical Union's Executive Committee. The other six members are from the United States, England, France, Holland, Italy, and Sweden.

The international astronomical bureaus, suspended during the war, are being reestablished with much of the former German activities going to Russians.

The British astronomer royal, Spencer Jones, presided at the meetings, at which the American delegation consisted of Dr. Shapley, Dr. Otto Struve of Yerkes Observatory, and Dr. Joel Stebbins of Washburn Observatory.

Science News Letter, March 30, 1946

PSYCHOLOGY

"Lie Detector" Doesn't

Reportedly used at Oak Ridge to trap those stealing U-235 or telling atomic secrets, it is an instrument of third-degree, not scientific crime detection.

➤ THE SO-CALLED "lie detector", reportedly used to trap those stealing uranium 235 or selling atomic secrets, is an instrument of third-degree intimidation, not of scientific crime detection. Its evidence is not generally accepted in courts of law.

The "lie detector" does not detect lies. It only shows up the emotional excitement of the victim. This is done by measuring respiration, blood pressure and the electrical resistance of the skin.

When you are scared, or angry, or embarrassed, your heart beats faster, your breath is quickened and moisture is likely to break out on your forehead or the palms of your hands. And since the moisture of your perspiration changes the way in which your skin conducts an electric current, the "lie detector" tells your questioner all about your uncomfortable feelings. Although you may try to preserve a poker face, it is difficult to control heart rate and perspiration. So the questioners may literally "sweat it out" of the unhappy suspect.

Scientists do not rely on the evidence of the "lie detector," however, for the obvious reason that not all persons frightened by third-degree questioning are liars or guilty of crime.

Any worker at Oak Ridge might very well be terrified at being accused of stealing U-235 in this day of spy scares. Or he might be violently angry at this accusation of dishonesty and traitorous behavior.

On the other hand, a psychopath or professional liar may feel no emotion at all at his own falsehoods and the "lie detector" would give such a person a perfect score for truth.

The instrument is not a product of the atomic age. Although it may have been modified during the years, the same sort of instrument has been known and in limited use for some twenty years or more. During that time it has not been established as generally useful.

Evidence obtained by the "lie detector" has never stood up in courts of law. In a few cases, it has been accepted by lower courts, but has not withstood appeal.

Chief usefulness of the gadget is as an aid to the police in scaring an ignorant or superstitious person into making a confession of crime. An empty black box, if it looks mysterious, would serve the same purpose—and has been used for it.

Science News Letter, March 30, 1946

ENGINEERING

Faster Production of Steel Sheets Contemplated

➤ FASTER production of the flat steel plates on which the automotive industry heavily depends is contemplated in a new mechanical setup on which U. S. patent 2,397,029 has been issued to W. H. McLaughlin and G. H. Rendel of Gary, Ind., assignors to the Carnegie-Illinois Steel Corporation.

The big rolls of sheet metal, as they are delivered from the continuous-strip mill, are unreeled first through two sets of rollers that stretch the web tightly, thus straightening it. Thence it goes through a trimming machine that crops its edges straight, then through another series of rollers that give it a final flattening. Finally a massive pair of shear blades cut it to the desired lengths.

Science News Letter, March 30, 1946