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VOL. 95, No. 2477

FRIDAY, JUNE 19, 1942

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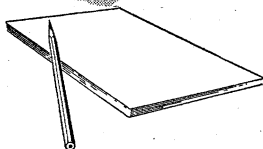
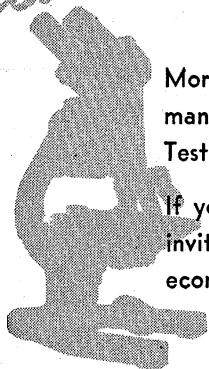


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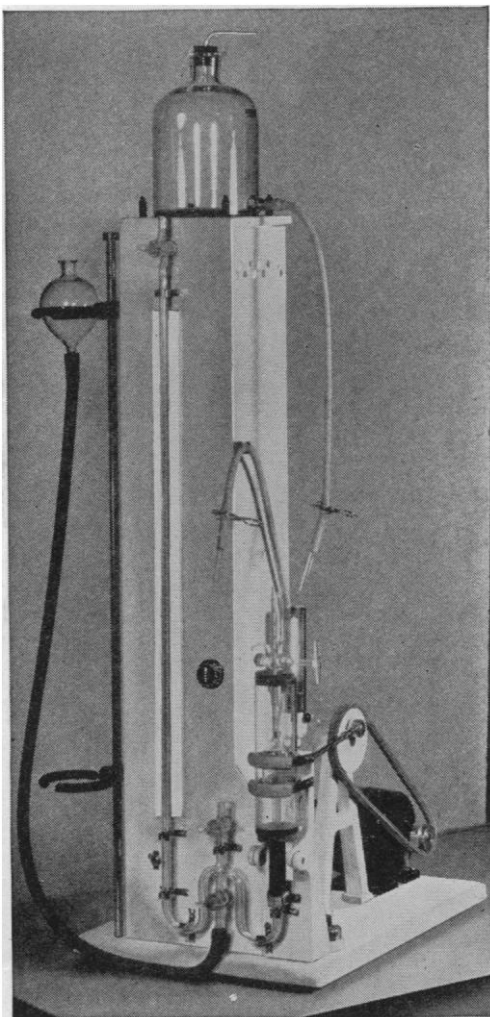
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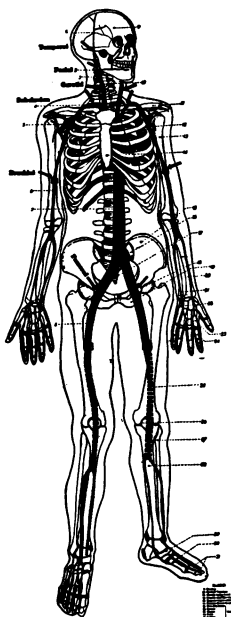
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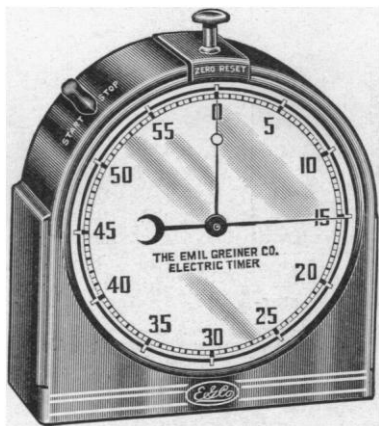
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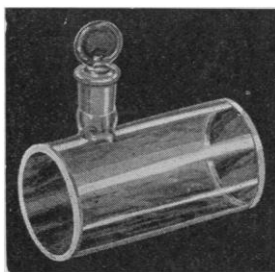
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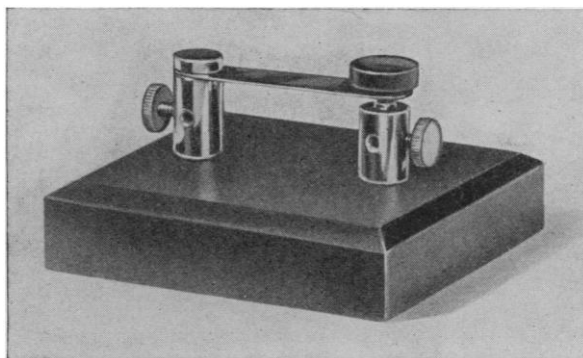
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VOL. 95

FRIDAY, JUNE 19, 1942

No. 2477

<i>The Responsibilities of Medicine in Wartime:</i> DR. FRED W. RANKIN	611	<i>Societies and Meetings:</i> <i>The Kansas Academy of Science:</i> JOHN C. FRAZIER	628
<i>Infrared Radiation:</i> DR. N. C. BEESE	614	<i>Reports:</i> <i>Field Museum of Natural History</i>	629
<i>Obituary:</i> <i>Joseph Charles Arthur:</i> DEAN FRANK D. KERN. <i>Recent Deaths</i>	617	<i>Special Articles:</i> <i>The Separation and Characterization of Carotenoid Pigments Produced from Mineral Oil by Bacteria:</i> DR. H. F. HAAS and OTHERS. <i>Synthesis of Ascorbic Acid in Excised Tomato Roots:</i> DR. MARY E. REID and DR. WILLIAM J. ROBBINS	631
<i>Scientific Events:</i> <i>Report of the Committee on Sedimentation; The Dedication of the Bausch Hall of Science and History; The Dedication of the Technological Institute of Northwestern University; The American Medical Association</i>	619	<i>Scientific Apparatus and Laboratory Methods:</i> <i>An Apparatus for Vacuum Drying in the Frozen State:</i> EDWIN E. HAYS and PROFESSOR F. C. KOCH. <i>Elimination of Dehydration in Histological Technique:</i> DR. VIRGINIA LUBKIN and MARY CARSTEN. <i>X-rays from Radio Tubes:</i> HOWARD C. BRINKER	633
<i>Scientific Notes and News</i>	621	<i>Science News</i>	10
<i>Discussion:</i> <i>Methods of Detecting Mild Cases of Vitamin A Deficiency:</i> DR. H. D. KRUSE. <i>Rubber Analysis of Plants in South Carolina:</i> PROFESSOR J. H. MITCHELL, M. A. RICE and D. B. RODERICK. <i>Occurrence of Vitamins in Fungi:</i> PROFESSOR C. C. CARPENTER and E. W. FRIEDLANDER. <i>Release of Potassium by the Brain of the Dog During Electrical Stimulation:</i> DRS. V. H. CICARDO and A. TORINO. <i>A Century of Darwinism:</i> PROFESSOR CALVIN P. STONE	623		
<i>Quotations:</i> <i>Mr. McNutt and the Doctors; More Antiseptics from Molds</i>	626		
<i>Scientific Books:</i> <i>Chemistry:</i> PROFESSOR H. N. ALYEA and DR. GARFIELD POWELL	627		

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THE RESPONSIBILITIES OF MEDICINE IN WARTIME¹

By Dr. FRED W. RANKIN

LEXINGTON, KY.

MEDICAL EDUCATION

THE needs of both the military and the civilian population for adequate medical care emphasize the danger of reduction of either the present-day standards of medical practice or the number of physicians. At present approximately five thousand physicians are graduating yearly from the seventy-six accredited medical schools of the country. When one considers, however, that the loss due to death, retirement and other causes is approximately three thousand a year, it becomes apparent that it is impossible to build a reserve pool of any size in a short period.

¹ Concluding portion of the president's address before the American Medical Association at the ninety-third annual session, Atlantic City, N. J., June 9, 1942.

The standards of medical education in this country to-day undoubtedly are superior to those found in any other country in the world. Our public has available to it a quality of medical service elsewhere unsurpassed. One of the main problems in medical care is and has been for many years a distribution of talent, for admittedly the concentration of physicians in urban areas has been too great, whereas the dilution among rural populations has been a major and perplexing affair. However, this question of distribution of more physicians and of maintaining present medical standards is one which we can hardly expect to be satisfactorily solved during the present period. The method of production of more physicians and of maintaining present medical standards is one which

allowed no such growth. Finally, the cost of the entire process is well within the capacity of the ordinary laboratory, if not cheaper than present methods.

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This is a preliminary report. Further experimentation in progress is aimed at eliminating heat and at shortening the procedure. The protean qualities of this plastic make such improvements highly probable.

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The materials required are:

Two Ford model T ignition coils (KW brand).

A step-down transformer, from 110 to 12 volts (if unavailable, two 110–6.3 volt transformers commonly used in radio circuits can be substituted with the 110-volt sides connected in parallel and the 6-volt sides in series).

An old 01-A radio tube.

¹ *Radiology*, 29: 721, 1937.

A small wedge of sponge rubber.

Some No. 22 wire for hook-up connections.

A small portion of a metal foil.

The two spark coils are connected in series by connecting the two terminals nearest the vibrators together. The 12-volt source is connected to the two terminals on the ends opposite the vibrators. The 110-volt end of the transformer is connected with a 110-volt line source. One of the vibrators is turned down tight so that it does not operate. A wedge of sponge rubber is slipped under the other vibrator to produce the maximum frequency possible. This adjustment takes about five minutes. One high tension lead is connected with the four prongs of the base wired together and the other with the foil wrapped around the upper part of the radio tube. The foil should not cover the portion of the tube facing the flat side of the plate element inside where the x-rays originate. The radio tube should be mounted on an insulated support, for the voltage is about 16 KV to ground with about 32 KV between the two high-tension terminals. A small glass tumbler, with a strip of adhesive tape, makes a good support. Radio tubes displaying a green fluorescence produce an x-ray beam of greater intensity than tubes showing a blue fluorescence.

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HOWARD C. BRINKER

ST. PAUL, MINN.

² *Transactions of the American Society of Metals*, p. 732. 1941.

BOOKS RECEIVED

- BENT, ARTHUR CLEVELAND. *Life Histories of North American Flycatchers, Larks, Swallows, and their Allies*. Pp. xi + 555. 70 plates. U. S. Government Printing Office. Paper, \$1.00.
- Contributions to the Calculus of Variations, 1938–1941*. Pp. vii + 527. University of Chicago Press. \$3.00.
- HAYNES, WILLIAMS and ERNST A. HAUSER. *Rationed Rubber*. Pp. vii + 181. Alfred A. Knopf, Inc. \$1.75.
- HOLLINGWORTH, LETA S. *Children Above 180 IQ*. Pp. xvii + 332. World Book Company.
- Physics of the Earth. IX—Hydrology*. Edited by OSCAR E. MEINZER. Pp. xi + 712. Illustrated. McGraw-Hill. \$7.50.
- TSCHAN, FRANCIS J., HAROLD J. GRIMM and J. DUANE SQUIRES. *Western Civilization. The Decline of Rome to 1660*. Pp. 783 + xciii. Illustrated. J. B. Lippincott. \$3.25.

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CONTENTS

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- Anoxia in Relation to the Visual System. Dr. E. Gellhorn.
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- Alpha Waves in Relation to Structures Involved in Vision. Dr. T. J. Case.
- Recent Evidence for Neural Mechanisms in Vision Leading to a General Theory of Sensory Acuity. Drs. W. H. Marshall and S. A. Talbot.
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