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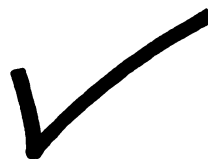
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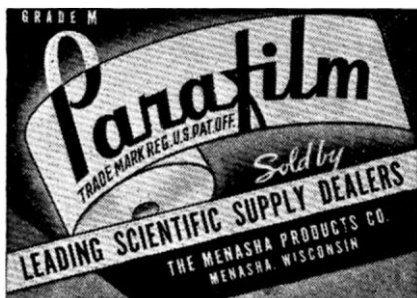
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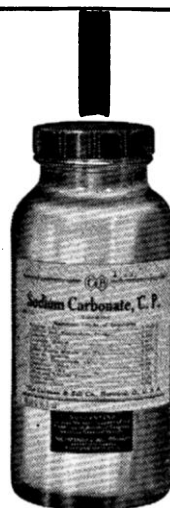
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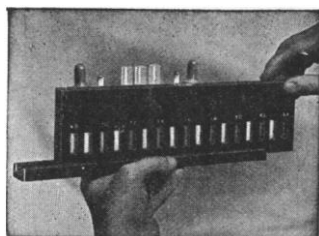


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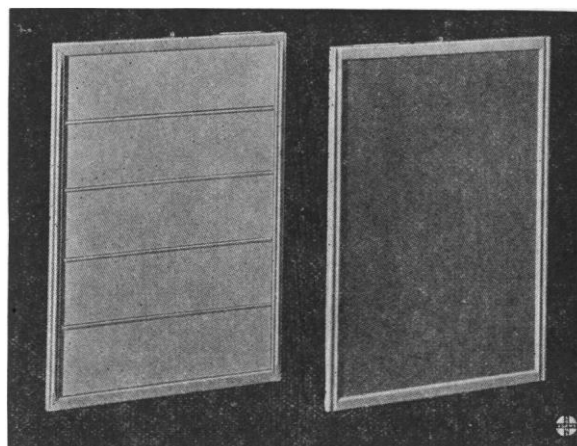
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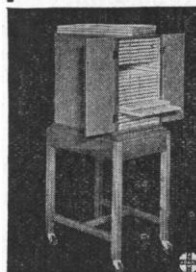
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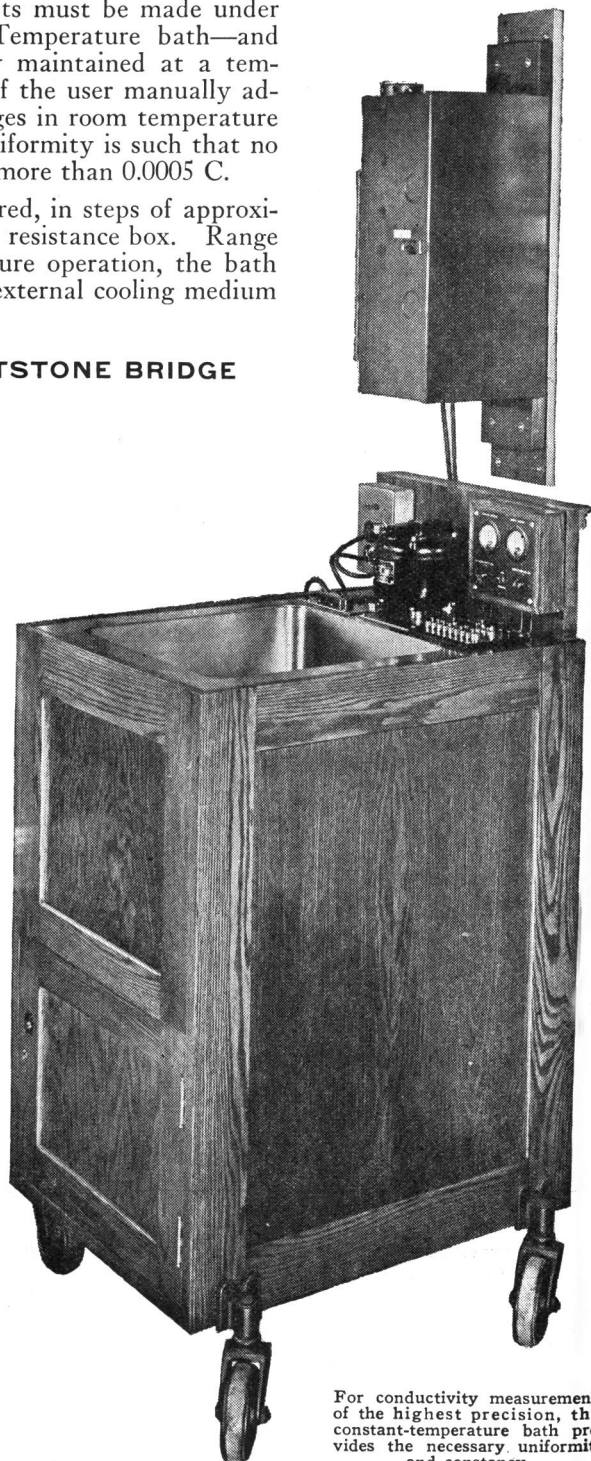
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VOL. 91

FRIDAY, MARCH 8, 1940

No. 2358

<i>New Methods in Spectroscopy</i> : PROFESSOR GEORGE R. HARRISON	225	and OTHERS. <i>Isolation of a Crystalline Derivative of Pantothenic Acid</i> : D. W. WOOLLEY. <i>The Structure of Pantothenic Acid</i> : PROFESSOR ROGER J. WILLIAMS and DR. RANDOLPH T. MAJOR. <i>Preliminary Studies on Mating Reactions of Enucleate Fragments of Paramecium bursaria</i> : DRS. VANCE TARTAR and TZE-TUAN CHEN	243
<i>Forces Driving the Respiratory Act</i> : DR. ROBERT GESELL	229	<i>Scientific Apparatus and Laboratory Methods</i> : <i>A Method of Substituting Fine Sapwood for Malt Agar in Culturing Test Fungi</i> : DR. ERNEST E. HUBERT. <i>Filing Photographic Copies of Articles</i> : ELMA T. EVANS and R. MAX GOEPP, JR.	247
<i>Scientific Events</i> : <i>The Beit Memorial Fellowships; Nominations to the Council of the American Association of Museums; Symposium on the Thermodynamics of Hydrocarbons; Pioneers on the American Frontiers of Industry. Recent Deaths</i>	233	<i>Science News</i>	8
<i>Scientific Notes and News</i>	236		
<i>Discussion</i> : <i>Science in China</i> : PROFESSOR WILLIAM S. COOPER. <i>Injury to Trees from Sulfur Dioxide Fumes of Electric Refrigerators</i> : DRS. MALCOLM A. MCKENZIE and LINUS H. JONES. <i>Anthelmintic Activity of Fresh Pineapple Juice in Vivo</i> : DR. E. KUITUNEN-EKBAUM	238		
<i>Societies and Meetings</i> : <i>The American Association of Scientific Workers at Columbus</i> : PROFESSOR ENOS E. WITMER	241		
<i>Reports</i> : <i>Grants for Research of the Virginia Academy of Science</i> : DR. E. C. L. MILLER. <i>Grants for Research of the American Geological Society</i>	242		
<i>Special Articles</i> : <i>The Possible Identity of Vitamin H with Biotin and Co-enzyme R</i> : PROFESSOR VINCENT DU VIGNEAUD			

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NEW METHODS IN SPECTROSCOPY¹

By Professor GEORGE R. HARRISON

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

IN expressing my appreciation of, and gratitude for, the high honor which is bestowed in the award of the Rumford Medals, I am mindful of the obligation which is laid upon a medallist to hold in mind the true significance of such an award. In all human affairs there are values which are of so intangible a nature as to require frequent concrete symbolization if we are to keep their import before us; this is an occasion of such symbolization. I accept these medals, not as a reward for accomplishment, but as symbolic of a vast array of aspirations which we are gathered here to celebrate: the determination of our society that the search for truth shall be prosecuted diligently; the desire that men shall be encouraged in that prosecution; the hope that opportunity for such search may

¹ Address on the occasion of the Award of the Rumford Medals, of the Academy of Arts and Sciences, Boston, October 11, 1939.

continue in constantly increasing measure; the conviction that every addition to our knowledge of the world in which we live, no matter how slight, brings one step closer the day when men shall be freed from the terrors which have beset them all through the ages—terrors which, though at times they may seem overwhelming, do in fact gradually become less.

Not the least of our duties of realization this evening is the appreciation of the progress which has taken place since 1839 in one of those branches of physical science which Count Rumford desired to further when he arranged for the provision of medals in recognition of researches on heat and light. Later it will be my pleasant duty to recount some of the recent developments in the study of light with which I have had the good fortune to be associated, but before I come to the specific portion of my address which deals with

After the required growth has been reached, the test pieces are moistened by adding a known amount of sterile water to each one by means of a sterilized pipette. The pieces are then placed in position over the glass tube with one of the $1\frac{1}{2} \times 2$ inch faces in contact with the fungus mat. From 8 to 10 test pieces can be placed in a jar at one time. With care in preventing contamination of the cultures, they can be used over again as soon as the vigor of the fungus is renewed on the V boards.

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Our library is the main library devoted largely to industrial chemical research for a medium size corporation. In building up photographic files, our policy has been to get photostat copies of articles under five pages and film copies of the longer ones. In the files, we have found that it is more convenient to interfile the films and photostats as a skeleton journal file—alphabetically by journal and then chronologically. This is expandable to almost any degree and eliminates extensive cataloguing, since *Chemical Abstracts* serves as a useful index. In the future, the abstract in *Chemical Abstracts* will be stamped "Filed" in the margin to show that a copy of the article is available in our library.

We have found, as did Brown and Austin, that the majority of technical articles are comparatively short, and the following scheme was devised for film strips: Correspondence size manila folders were lined with

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An illuminated hand viewer is almost a necessity in identifying film strips which are ready for filing or for rapid location of data in tables, when only one or two figures are wanted. Also we have found that a small movable table for the reading machine simplifies the problem of use. It is ordinarily kept near the desk of the bibliographer where it can be used for reading or placed directly behind the typewriter to copy data.

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- Bulletin géodésique Organe de L'Association de Géodésie*, No. 61, Janvier-février-mars, 1939. Pp. 378. Illustrated. J. Hermann, Paris.
- Cambridge Philosophical Society, Proceedings*. Vol. 36, Part 1, January, 1940. Pp. 130. Illustrated. Cambridge Univ. Press, London. 10/6.
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- Institutum Divi Thomae, Studies of the*. Vol. II, No. 2, November, 1939. Pp. viii + 156-286 + vi. Illustrated. Institutum, Cincinnati.
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