

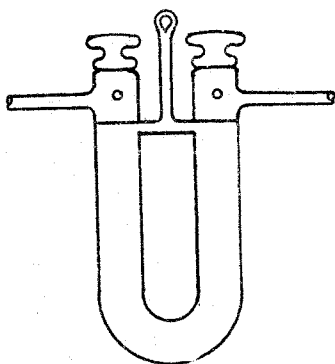
for platinum, not only as they are much less expensive, but also because with them the superheating and consequent bumping seems to be less. The joints between the heavy platinum leads used through the glass and the coil are made by twisting the two together and covering the union with a little bead of melted "Einschmeltz" glass. Probably because there is a high resistance at this junction, the bubbles of vapor originate here and rising through the body of the liquid keep it as well stirred as it would be with a stream of air. Of course, in working with liquids which would attack the base metals, the alloys cannot be used but they can safely be employed with most organic substances.

The fact that the source of heat is under absolute control makes it possible to regulate the rate of distillation very closely and to duplicate one's fractionations almost exactly. This is of great advantage where a number of samples of the same material are being examined, as often comparatively small variations in the rate of distillation materially affect the properties of the various fractions.

NOTE.

A Modified Drying Tube.—In view of the large percentage of breakage of U tubes and the resultant loss to the chemist of time and determinations when engaged in carbon analyses, the writer has endeavored to modify the usual form of tube in order to minimize this trouble.

In the accompanying photo is shown the tube as used in this laboratory and made for us by Eimer & Amend at an additional cost of only 25 cents each. The tube is of thick glass and is of the same bore throughout.



The brace and perpendicular bar are of glass possessing practically the same coefficient of expansion as the body of the tube, in order to properly withstand temperature changes, while the end of the upright bar is drawn into a loop, by means of which the tube may be suspended from the balance beam or train support. The advantage to be gained from this loop is great in having all the arm openings upon correct alignment during an analysis and in eliminating

the use of wire in suspending.

Then, too, we do away with the changes of weight due to chemical action upon copper wire, which is usually used, and an entire glass surface is presented for wiping before weighing.

It can readily be seen that the breakage at the curve of the U, due to pressure or pull, is reduced to a minimum, and we believe the small

additional cost of 25 cents each is more than equalized by the decreased breakage.

This tube has been in use for some time in this laboratory to our entire satisfaction, and we trust it may be of some value to other chemists who make an extensive use of drying tubes.

W. H. MCINTIRE.

STATE COLLEGE, PA.

NEW BOOKS.

Laboratory Experiments in General Chemistry. By HERMAN SCHLUNDT, Professor of Physical Chemistry, University of Missouri. 85 pages. Published by E. W. Stephens Co. Columbia, Mo. 1910. Price, 50 cents.

This small volume includes the more important experiments on the non-metallic elements as usually given in a course on General Chemistry. Experiments on the metallic elements have been omitted as the author feels "that this work should be undertaken in Analytical Chemistry, and be allotted some of the time so largely used for laboratory practice in following a scheme of separations." Careful and minute attention has been given throughout to all possible questions that may arise in the students' mind. The great amount of space required for this descriptive detail and instructive advice, literary as well as chemical, has precluded the consideration of many important subjects. Thus within the eighty-five pages, phosphorus and boron find no place and the sulfur, nitrogen, and silicon acids receive but little notice. The laboratory outline is well adapted for an elementary half-year course in first-year college chemistry. The student should find the explicit directions most helpful in laboratory and reference work. Cross-references are made to two texts: Alexander Smith's "General Chemistry for Colleges" and Kahlenberg's "Outlines of Chemistry." Chapter I on "Apparatus," and Chapter V on "Equivalent Weights," deserve especial mention for clearness and completeness of presentation. Unfortunately the drawings throughout the book are very poor.

WILLIAM J. HALE.

Die Absorption. By J. M. VAN BEMMELEN. Published by Theo. Steinkopf, Dresden. 548 pp. 12 marks, unbound; 13½ marks, bound.

Those who know the literature of colloids, know also that Van Bemmelen is one of those rare experimenters who helped to lay the foundation of much of the recent work on colloidal hydrates and at a time when but a very few investigators were studying the subject. He is still active, though in his eightieth year, and Dr. Wo. Ostwald has now, with his assistance collected his separate publications which bear most directly upon the subject of colloids and particularly the subject of absorption. Dr. Jorissen has written a five-page biography of the author as an introduction to the work, as well as a complete bibliography of his publications.