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A NEW FORM OF POTASH BULB.[1]

BY M. GOMBERG.

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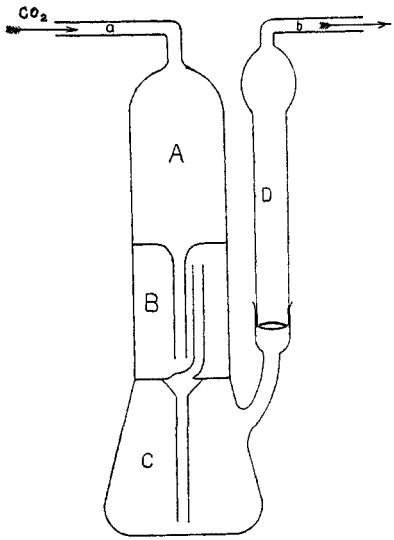
THE potash bulb most frequently used at present in elementary organic analysis is that known as Geissler's bulb. While neat and compact, it still has the same drawback as possessed by other forms of potash bulbs; namely, that even with the most careful handling it is not unfrequently broken. Some two years ago I drew up a design for a different form of bulb, wherein all the connections should be enclosed. Several attempts to have it made in this country have proven unsuccessful. The design was then sent to Greiner & Friedrichs, of Thüringen, and I have recently received from them samples of such bulbs. Meanwhile, it came to my notice that a bulb based on similar principles has been put upon the market by Bender & Hobein, of München. A comparison of the two bulbs shows them, however, to be sufficiently different to justify me in presenting a description of the one made according to my design, without claiming priority as to the principle of construction.

The arrangement and working of the bulb will appear clear from the subjoined diagram, which presents the apparatus reduced to one-half its actual size.

The potash bulb is divided into three compartments, *A*, *B* and *C*. *B* and *C* contain the potash solution for the absorption of the carbon dioxide, while *A* serves as a safety reservoir in case of backward suction. The bulb is filled by dipping *a* into the solution, and applying suction at *b*, until the two com-

[1] Communicated by A. B. Prescott. Read at the meeting of the American Chemical Society, Buffalo, N. Y., August 22, 1896.



partments *B* and *C* contain as much of the solution as would completely fill *A*, which is about thirty-five to forty grams of a 2 : 3 solution. *D*, which is fastened to the bulb by means of a ground-glass joint, contains solid potassium hydroxide, or soda-lime, supported by a plug of glass-wool. The liquids in *B* and *C* can be easily mixed when desired, by applying suction at *a*. The bulb, when filled and ready for use, weighs from sixty-five to seventy grams, and undoubtedly can be made even much lighter.

The total number of compartments is thus reduced from five in Geissler's form to three in the form here presented, while the absorbing chambers are reduced only from three to two. The construction of the bulb is such that *C* can never get overfilled by the solution from *B*.

This form of a potash bulb possesses the advantages first, that it can be easily handled and wiped, presenting the outside surface of an ordinary small flask, and second, that it can be set without any support, and can be weighed without suspending it if so desired.

I wish to express my thanks to the firm of Greiner & Friedrichs, of Thüringen, who have kindly made the bulb for me in a most satisfactory manner.

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REDUCTION OF CONCENTRATED SULPHURIC ACID BY COPPER.

BY CHARLES BASKERVILLE.

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IN a previous communication[1] the writer noted that copper was acted upon by concentrated sulphuric acid (1.84 sp. gr.) not

[1] This Journal, 17, 90.