1903). The writer desires to correct the statement referred to, but does not relinquish his claim to priority, since a notice of Evans and Fetch's paper appeared in the Proceedings of the American Chemical Society for 1901. THOMAS EVANS.

UNIVERSITY OF CINCINNATI,
December 21, 1904.

A New Wash Bottle.—The bottle described in this article was devised to replace the unsatisfactory rubber Bunsen valve by one of glass. The valve is made as follows: A piece of glass tubing 15 cm. long and from 4 to 5 mm. bore, is slightly contracted about 3 cm. from one end by heating in a small blast-lamp flame and drawing out a trifle. The valve is made of a piece of thin-walled tubing that fits loosely into the larger tube, leaving about 0.5 mm. free space all around. One end is closed and rounded as much as possible by rotating the end in a small flame. It should not taper too much, as there is then a tendency for it to wedge when in use.

Fig. 1.

The closed end is then made to fit the contracted part of the large tube by grinding with emery and water, taking care to rotate in one direction. From time to time the tubes are washed and the joint tested by sucking strongly into the longer end while it is still wet.

The closed end of the inner tube is then pushed into a cork just far enough to be held securely, and it is fused off as close to the cork as possible, using the smallest flame of the lamp. It is kept soft until the expanding air inside rounds it off. The finished valve should be about 1 cm. long. It is then slipped loosely into place in the outer tube and sealed in. This is the most difficult part of the whole operation, for the scratches make the ground tube very liable to crack. It is best to commence

Fig. 2.

heating at the end, and, when that is red-hot, to gradually heat along towards the valve. It is drawn out close to the valve by attaching a bit of glass rod as a handle, leaving about 3 mm. play.

It must taper abruptly and not be too symmetrical, for otherwise it will be difficult to blow with sufficient force into the bottle. Break off the drawn-out portion, leaving an opening 1.5 to 2 mm. wide, and round the edges in the flame. Bend the tube above the valve to the proper curve, and it is ready for use.

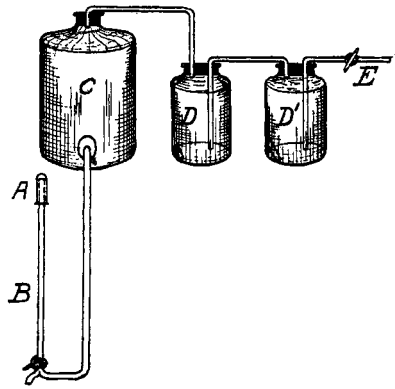
The wash-bottle is set up exactly as when a Bunsen valve is used. It differs from an ordinary wash-bottle only in the addition of a third, short tube bent so that it can be closed easily by the thumb.

C. E. WATERS.

BUREAU OF STANDARDS,
WASHINGTON, D. C.

Note on a Simple Apparatus for the Preservation of Standard Sodium Sulphide and Other Readily Oxidizable Solutions.—The following results were obtained before and after the installation of a yellow phosphorus and water scrubber, as described briefly below:

ZnO equivalent per cc.	
0.0131 Wednesday P.M.	*Before.*
0.0123 Thursday A.M.	Bottle about half emptied but stopped up when not in use.
0.0118 Thursday P.M.	
	After.
0.01953 Thursday P.M.	Using one 800-cc. scrubber and the same solution of sodium sulphide.
0.01957 Friday A.M.	
0.01960 Saturday A.M.	
0.01970 following Saturday.	
0.01830 four weeks later (bottle two-thirds emptied).	



HEATH & MILLIGAN MFG. CO.,
CHICAGO, ILL.

Apparatus.

A—Loose glass cap for the burette.

B—Two-way stop-cock burette.

C—Container for the standard solution. The bottle is painted black.

D—D′ scrubbers.

E—Stop-cock.

Very little phosphorus is consumed.

HANS MANNHARDT.