

The apparatus is continuous in action and completely exhausts all of the acid used. It has been thoroughly tested, with highly satisfactory results, for the generation of hydrogen sulphide, hydrogen and carbon dioxide. In generating carbon dioxide the action of the acid on the marble is so rapid that the tube, C, may be left open at the upper end without danger of a great excess of acid entering the lower compartment. The action of the acid on pure zinc or on ferrous sulphide being considerably slower, it was found better to somewhat limit the flow of acid by means of the closed tube with a small hole, in the manner described. When pure zinc in sticks is used it is advisable to add a little copper sulphate to the first charge of acid.

A very simple device (not new) which can be highly recommended consists in placing between the generator and wash bottle a constricted tube or capillary which limits the flow of gas to a certain maximum. This not only prevents a waste of gas, but also gives a more uniform stream. The new gas generator may be obtained from Bausch and Lomb, Chicago.

NOTE ON ETCHING WITH HYDROFLUORIC ACID.

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In the interesting and practical experiment of etching on glass with hydrofluoric acid, it is desirable to have the entire surface coated with a uniformly thin layer of wax. To obtain this result, the writer for a number of years has kept an ordinary copper steam bath, six inches in diameter, nearly filled with paraffine. This is carefully heated to avoid burning until it is all melted. The glass object to be etched is immersed in this liquid and quickly withdrawn, when both sides are uniformly covered with a thin layer. The etching is so satisfactorily accomplished that many times the students are desirous of repeating the experiment, and they etch beautiful designs on various articles, watch crystals, paper weights and similar objects. Thus they have a perpetual reminder of the days spent in the fascinating realms of experimental chemistry.