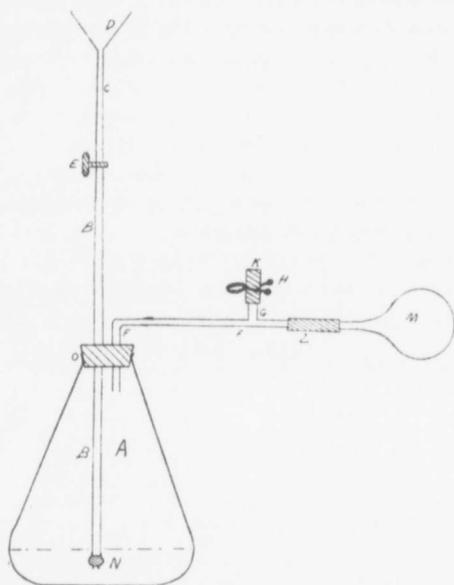


CXXVII.—*An Improved Form of Apparatus for the Rapid Estimation of Sulphates and Salts of Barium.*

By WILLIAM ROBERT LANG and THOS. BOLES ALLEN.

N. TARUGI and G. Bianchi (*Gazzetta*, 1906, **36**, i, 347) describe an apparatus for the rapid and exact estimation of sulphates and salts of barium by a volumetric method based on the rapid clearing of turbid solutions in narrow tubes. (For a short description of their apparatus



see *Abstr.*, 1906, **90**, ii, 627.) The authors have modified this apparatus materially; the following short description and diagram will serve to explain it.

The vessel, *A*, containing the acidified sulphate is placed on a flat burner, the approximate amount of barium chloride solution, ascertained by previous rough experiments, run directly into the flask, the stopper, *O*, with its attachments, inserted, and the contents kept at the boiling point. *FF* is a T-tube, on the branch, *G*, of which is fixed a small piece of rubber tubing with a pinchcock, at this stage of the experiment left open to the air. *N* is a small thistle-shaped tube filled with glass-wool which is found materially to clear the turbid solution as it passes up to the narrow tube. The pinchcock, *H*, is then