

frequencies by means of this agency in the case of the metals mercury, zinc, cadmium, and magnesium seemed rather remarkable. It is not clear from the papers of Hartley and Ramage whether more than a casual examination was made of this point, but before accepting as final the conclusion which may be drawn from their results as to the probable impossibility of stimulating the fundamental frequencies of these elements by means of Bunsen flames, especially in regard to mercury, zinc, and cadmium it was thought desirable by the writers to subject this matter to a closer inquiry. This has now been done, with the result that it has been found possible to obtain with the Bunsen flame the fundamental frequencies mentioned of the spectra of mercury, cadmium, and magnesium, but up to the present it has not been found possible to obtain such with zinc.

2. Apparatus.

In the experiments two types of Bunsen burner were used. One, shown in fig. 1, consisted of an ordinary burner A, to which was attached at the top a steel close-fitting tubular cap BB, provided with a conical shaped cover C.

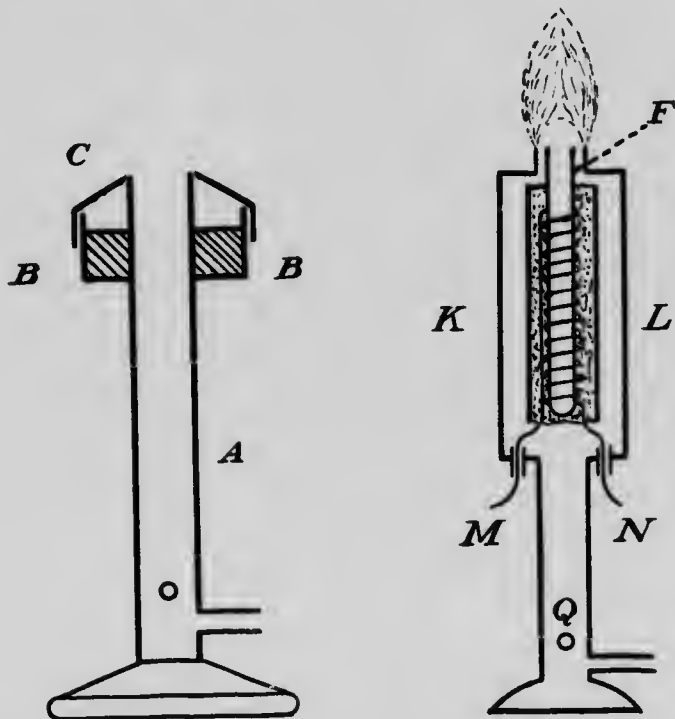


FIG. 1.

FIG. 2.