of the stop-cock. *b*, *c*, and *d* are ordinary stop-cocks, pierced to the bore of the capillary. A general idea of the use of the different parts of the apparatus will be obtained from the description of the analysis of a sample of air extracted from sea-water. Suppose the instrument to be set up, and with the gaseous mixture in the eudiometer, where its volume has been ascertained.

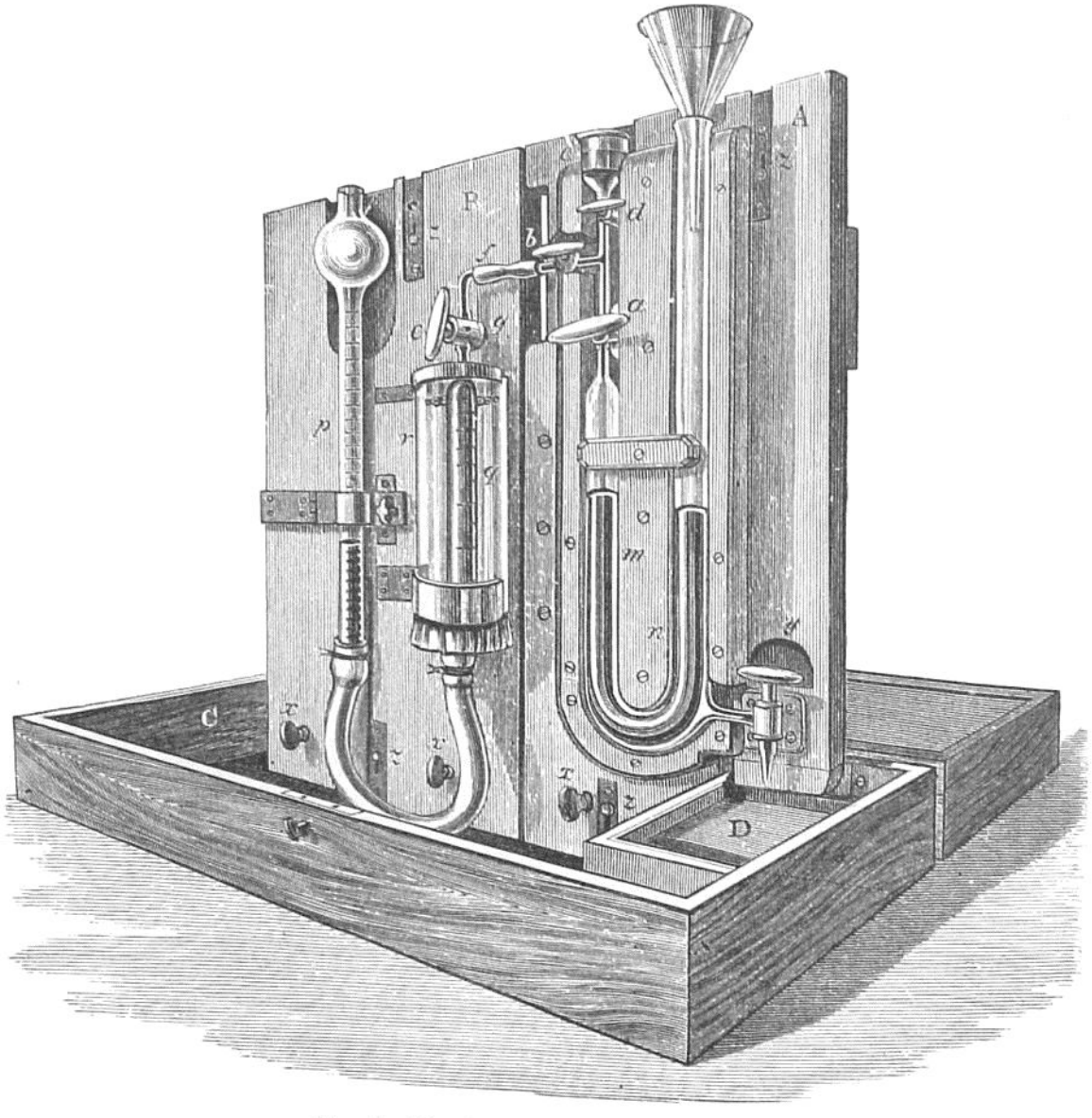

FIG. 5.—The Gas-analysis Apparatus.

The mixture consists, we shall say, of oxygen, nitrogen, and carbonic acid. The last of these is determined first by absorption by caustic potash. For this purpose mercury is run out of *n* by the stop-cock *y*, *p* is raised, and the stop-cocks *c*, *b*, and *a* opened. The air is thus driven over out of *q* into *m*, mercury being allowed to fill the capillary, when the stop-cocks are again shut.