condenser b, a cylindrical copper vessel $5\frac{1}{2}$ inches in diameter, with a block-tin worm. The lower end of the worm is attached to the receiver c by a bent glass tube with a flexible joint k, from which a glass tube leads to the bottom of the receiver. The flexibility thus obtained is of much use, and enables fresh surfaces of baryta-water to be constantly exposed to the passing gases by shaking the receiver. After passing through the baryta-water in the receiver, the gases leave it by a tube filled with broken glass moistened with baryta-water, not shown in the figure, and thence through the bulbed U-tubes d, d, containing baryta-water, and soda-lime tube x to the aspirator e, which delivers into a bottle outside the port.

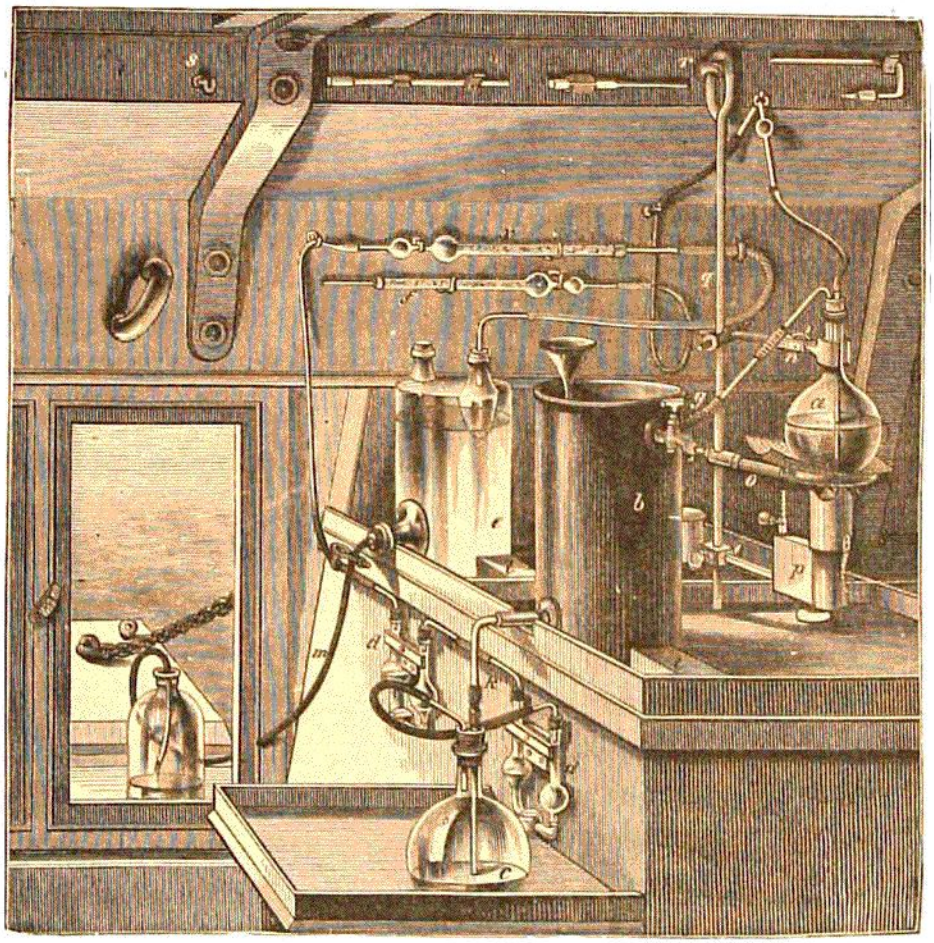

Fig. 7.—Carbonic Acid Apparatus.

The flask a is supported on the ring o by the clamp n. Both of these, along with the lamp p, are pinched to the iron rod q in the usual way. This rod is attached to the projecting beam of the ship's side by the eye-bolt r, in which it has a play of rather more than an inch, to enable it to be withdrawn from the hole in the working bench into which it fits. The usual amount of water used for the carbonic acid determination was 225 c.c., and the condenser b held sufficient water to condense this amount without requiring renewal.