

compartments. For the sake of handiness these drawers were divided into two, so that each recess instead of having one drawer 2 ft. long, had two drawers, each 1 ft. long, stowed one behind the other. A number of drawers were fitted to receive articles in every-day use—filtering paper, blowpipe apparatus, corks, india-rubber, &c.; and one was specially set apart for nails, screws, and hooks, things not without their uses in a laboratory on shore, and absolutely indispensable at sea, where every article, even the smallest, must not only have its place, but must be secured in it.

The top of the bench was fitted with shifting battens to keep things from falling off, and at one corner a leaden sink was let into it, communicating with the sea by a pipe passing through a scupper. At the aftermost end of the bench, and on a low three-legged stool, was a large tubulated glass bottle for holding distilled water. The whole of the ship's supply of water was condensed from sea water, with rare exceptions during prolonged sojourns in harbour, and it was always of excellent quality. For the laboratory it was generally obtained fresh and hot from the condenser, and before it could take up carbonate of lime from the white-wash with which the tanks were coated. The glass bottle was broken in the first rough weather met with on the passage from Bahia to the Cape of Good Hope. During nearly a year's cruising in the comparatively calm waters of the tropics, the precaution of lashing the bottle in its place had been neglected, with the result above mentioned. It was replaced at the Cape by an earthenware filter.

In place of retort-stands, to support apparatus, iron stanchions were used, let into eyebolts in the beams, and fitting into holes in the top of the bench, or capable of being folded up against the beams above when not in use. There were two of these, and one is shown in the figure stowed away above out of use, and the other is supporting a part of the carbonic acid apparatus, which will be described further on. To accommodate another part of this apparatus, a small folding table, supported by a bracket, was fitted to the foremost part of the bench.

Against the after bulkhead were shelves for accommodating flasks, cylinders, and other pieces of apparatus, also blocks of wood pierced for test-tubes. Against the inner bulkhead were shelves for bottles containing standard solutions, flasks, beakers, and other apparatus. The burettes were supported against the front of the shelves. They were of the ordinary type of Mohr's burettes, except that at the top they were contracted to the same diameter as at the lower end. When not in use they were closed by a piece of india-rubber tube carrying a glass stopper. When one was to be filled, a glass tube, long enough to reach to the bottom of the bottle holding the standard solution, was attached to the nozzle below the pinchcock, and a sucking tube inserted above in place of the glass stopper. By opening the pinchcock and sucking above, the burette could be easily and economically filled with any reagent. For carbonic acid determination, baryta-water was in constant use, and by filling the burettes in this