

sink them*, till the Chains can pass under the Keels of the Vessels, either forward or aft, and hawl them to the proper Birth to which they were adapted, where fasten them with skrew Bolts or the like Contrivances for that Purpose, so that the Parts may meet and butt each other about the Midships, and be secured in that Position†.

It is necessary that such a Vessel should have two Decks very well supported, and at least five Feet and a half in height between Decks, that there may be convenient Room for Capstanes between Decks, and more especially for Oars to row in failure of Wind, and the better to keep her Head toward the Enemy, when within reach of their Shot.

As the Nature of the Service requires that these Vessels should be very stiff, and draw but very little Water when they have their Guns and Men aboard, it

* These counter Bottoms may soon be cleared of Water, by means of a Tube about nine Inches or a Foot square, and fifteen or twenty Feet long open at both Ends, made of Oak or Fir Plank, about one Inch and half thick, with a convenient Number of Valves in the upper Side, (this sort of Pump lying in an inclining Posture when in use) with a light Frame of Brass or Iron that fills the Tube, and has large Valves to fly open easily, when the Frame touches the Water. This Frame should be fastned to a Pole about two Feet longer than the Pump, and one or two Men working the Pole push the Frame to the Bottom of the Pump, the Valves open and let the Water continue in the Pump, as deep as the Pump is emerged, and as they attempt to hawl the Frame up the Valves shuts, and they hawl all the Water up that is in the Pump above the Valves.

I made some of these Pumps of such a Size, that every Inch in Depth contained a Gallon; one of them being emerged eleven Feet, six Men made eight Strokes in a Minute, which drew up above four Tons of Water.

† Vessels ordered after this Manner will endure a swell or gentle Summer Sea, and lye near the Shore with Cannon to annoy the Enemy and keep them at a Distance.