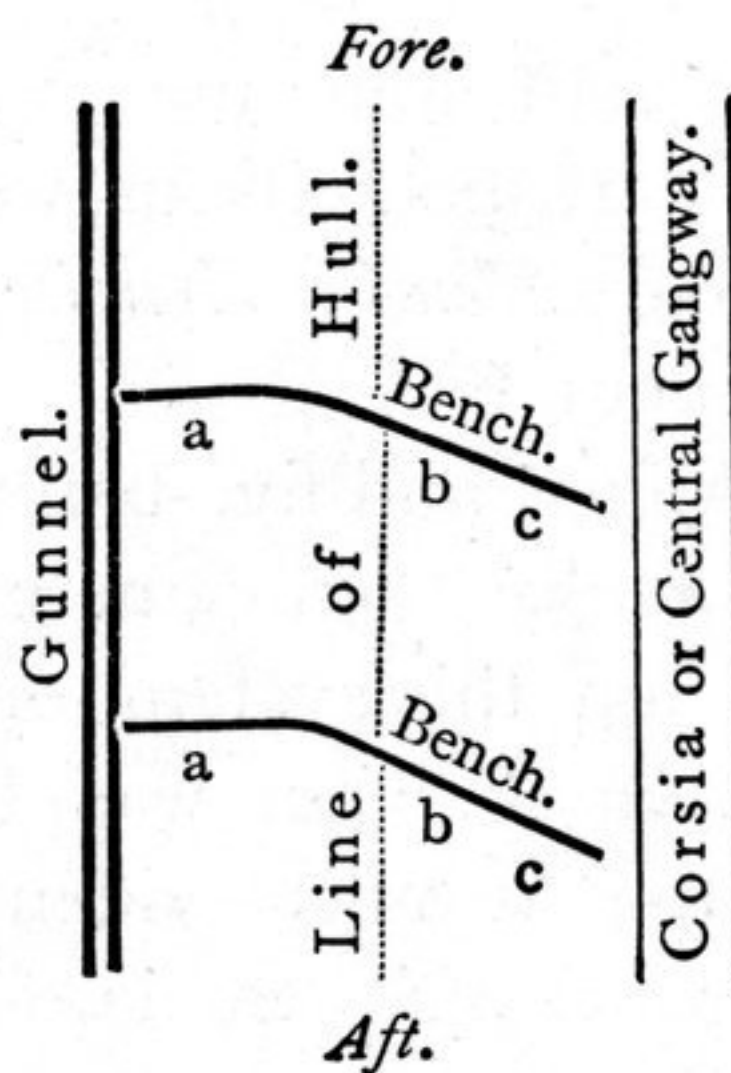


But to give room for the play of the oars and the passage of the



fighting-men, &c., this width was largely augmented by an *opera-morta*, or outrigger deck, projecting much beyond the ship's sides and supported by timber brackets.* I do not find it stated how great this projection was in the mediæval galleys, but in those of the 17th century it was *on each side* as much as $\frac{2}{3}$ ths of the true beam. And if it was as great in the 13th-century galleys the total width between the false gunnels would be about $22\frac{1}{4}$ feet.

In the centre line of the deck ran, the whole length of the vessel, a raised gangway called the *corsia*, for passage clear of the oars.

The benches were arranged as in this diagram. The part of the bench next the gunnel was at right angles to it, but the other two-thirds of the bench were thrown forward obliquely. *a, b, c*, indicate the position of the three rowers. The shortest oar *a* was called *Terlicchio*, the middle one *b Posticcio*, the long oar *c Piamero*.†

I do not find any information as to how the oars worked on the gunnels. The Siena fresco (see p. 35) appears to show them attached by loops and pins, which is the usual practice in boats of the Mediterranean now. In the cut from D. Tintoretto (p. 37) the groups of oars protrude through regular ports in the bulwarks, but this probably represents the use of a later day. In any case the oars of each bench must have worked in very close proximity. Sanudo states the length of the galleys of his time (1300-1320) as 117 feet. This was doubtless length of *keel*, for that is specified ("*da ruoda a ruoda*") in other Venetian measurements, but the whole oar space could scarcely have been so much, and with twenty-eight benches to a side there could not have been more than 4 feet

* See the woodcuts opposite and at p. 37; also *Pantera*, p. 46 (who is here, however, speaking of the great-oared galleys), and *Coronelli*, i. 140.

† *Casoni*, p. 324. He obtains these particulars from a manuscript work of the 16th century by Cristoforo Canale.