the deck are to be taken from the dimenſions, obſerving, however, to add to theſe heights the thickneſg of the deck, as the deck line at the side repreſents the under part of the deck.

The foremoſt port is then to be deſcribed, ob­serving to place it as far aft as to give ſufficient room for the manger : the moſt convenient place will therefore be to put it between the frames R and T, and equally diſtant from each. It will then be placed in the moſt conſpicuous point of ſtrength, as it will have a long top-timber on the aft side and a long fourth futtock on the fore ſide of it. The ſecond port may be placed in like manner between the next two frames, which will be equally well ſituated for ſtrength as the former ; and by proceeding in this manner, the ports on the gun-deck may alſo be placed, taking care to have two frames between every two ports, all fore and aft.

The upper deck ports are then to be deſcribed ; and in order to diſpoſe of them in the ſtrongeſt ſituation poſſible, they muſt be placed over the middle between the gun-deck ports, ſo that every frame in the ſhip will run up to the top of the ſide, by their coming between a gun and upper deck port ; and every port will be between the frames, which will in a great meaſure con­tribute towards the ſtrength of the ſhip. With regard to the ports on the quarter deck, it is not of ſuch ma­terial conſequence if they cut the head of the frame, as in placing them the ſituation of the dead eyes muſt be conſidered, placing a port where there is a vacancy between the dead eyes large enough to admit of one ; observing always to place them as nearly as poſſible at equal diſtances from each other ; and where it happens that they do not fall in the wake of a frame, then that frame muſt by all means be carried up to the top of the ſide.

The neceſſary length of the round houſe being de­termined in the dimenſions, it may be ſet off ; obſervmg, however, to let it be no longer than is juſt ſufficient for the neceſſary accommodations, as the ſhorter the round-houſe the works abaft may be kept lower, and a low ſnug ſtern is always accounted the handſomeſt. Then ſet off the round of the deck at the foremoſt end, below the line drawn ; the deck at the ſide may be de­ſcribed by another curve drawn quite aft. Now, from the point for the round of the deck to the ſtern timber, draw a curve parallel to the top-timber line, and that will be the extreme height of the top of the ſide abaft, which height continues to range fair along to the fore­moſt end of the round houſe, and at that place may have a fall about 14 inches, which may be turned off with a drift ſcroll. At the fore part of the quarter­deck, the topſide may have a riſe of 14 inches, which may alſo be turned off with a ſcroll. But as the raiſing of the topſide only 14 inches at that place will not be ſuſſicient to unite with the heights abaft, it will there­fore be neceſſary to raiſe 14 inches more upon that, and break it off with a ſcroll inverted on the firſt ſcroll, and continue theſe two lines, parallel to the top-timber line, to the diſtance of about ſeven feet aft. At the foremoſt end of the round-houſe there is a break of 14 inches already mentioned ; and in order to make that part uniform with the breaks at the foremoſt end of the quarter-deck, there muſt be ſet down 14 inches more below the former ; and at theſe two heights continue two

curves parallel to the top-timber line, from the aft part of the ſtern to the ends of the two curves already drawn at the foremoſt end of the quarter deck. If they ſhould happen not to break in fair with them, they must be turned off with a round ; but to make them appear more handſome, the lower line may be turned off with a ſcroll. Theſe lines being drawn will repreſent the up­per edges of the rails.

The height of the top side at the fore part of the ſhip muſt next be conſidered; which, in order to give proper height for the forecaſtle, muſt have a rise there of 14 inches, the break being at the after end of the fore-caſtle, and turned off as before. But as this part of the ſhip is ſtill conſiderably lower than the after part, it will be necessary to give another of eight inches upon the former, and turn it off with a ſcroll inverted. Hence this part of the ſhip will appear more uniform to the af­ter part.

The finiſhing parts, namely the wales, ſtern, head, rails, &c. remain to be deſcribed. The wales may be firſt drawn ; and as the ſtrength of the ſhip depends very much on the right placing of them, great care muſt therefore be taken that they may be as little as poſſible wounded by the lower deck ports, and ſo placed that the lower deck bolts ſhall bolt in them, and alſo that they come as near as poſſible on the broadest part of the ſhip. In the firſt place, therefore, the height of breadth lines muſt be choſen for our guide. Theſe heights of breadth are to be taken from the di­menſions, and ſet off on the respective frames, and curves drawn through theſe points will be the upper and lower heights of breadth lines. The height of the wales may now be determined ; which in general is in ſuch a manner that the upper height of breadth line comes about six inches below their upper edge, and the wales are then placed right upon the breadth lines. Take the heights and breadths of the wales afore, at midſhips, and abaft from the table of dimenſions ; draw curves through the points thus found, and the wales will be repreſented.

The channel wales are then to be deſcribed. They are principally intended to ſtrengthen the top side, and muſt be placed between the lower and upper deck ports ; and the lower edge of them at midſhips ſhould be placed as low as poſſible, in order to prevent them from being cut by the upper deck ports afore and abaft. Take their heights and breadths from the dimenſions ; lay them off, and deſcribe curves through the correſponding points, and the channel wales will be repreſented.

Lay off the dimenſions of the waste rail found in the table ; and through the points draw a line parallel to the top-timber line all fore and aft. This rail terminates the lower part of the paint work in the top side, as all the work above this rail is generally painted, and the work of the top side below it payed with a varniſh, ex­cept the main wales, which are always payed with pitch.

Take the draught of water from the dimensions, and draw the load water-line, which is always done in green. Divide the diſtance between the load water-line and the upper edge of the keel into five equal parts, and through theſe points draw four more water-lines.

Set off the centres of the masts on the gun-deck ; their rake may likewise be taken from the dimenſions. Set off alſo the centre of the bowſprit, letting it be