four feet from the deck at the after part of the ſtem, which will give ſufficient height for a light and airy fi­gure.

Draw the knight-heads ſo as to be ſufficiently high above the bowſprit to admit of a chock between them for the better ſecurity of the bowſprit. The timber heads may alſo be drawn above the forecaſtle, obſerving to place the most convenient for the timbers of the frame, being thoſe which come over the upper deck ports, as they may be allowed long enough to form handsome heads. There ſhould be one placed abaft the cat-head, to which the foremoſt block is to be bolted, and there may be two ports on the forecaſtle formed by them, and placed where it is moſt convenient to the dead eyes.

Deſcribe the channels, taking them lengths and thickneſſes from the dimenſions, and place their upper edges well with the lower edge of the ſheer rail. The dead eyes may then be drawn, obſerving to place them in ſuch a manner that the chains may not interfere with the ports ; and the preventer plates muſt all be placed on the channel wales, letting them be of ſuch a length that the preventer bolt at each end may bolt on each edge of the channel wales. It muſt alſo be obſerved to give each of the chains and preventer plates a pro­per rake, that is, to let them lie in the direction of the ſhrouds, which may be done in the following man­ner : Produce the mast upwards, upon which ſet off the length of the maſt to the lower part of the head ; theſe ſtraight lines drawn from that point through the centre of each dead eye will give the direction of the chains and preventer braces.

The senders may be then drawn, obſerving to place them right abreaſt of the main hatchway, in order to prevent the ſhip’s side from being hurt by whatever may be hoiſted on board. The proper place for them will therefore be at timber 3 ; and the distance between them may be regulated by the diſtance between the ports. The cheſt-tree may alſo be drawn, which muſt be placed at a proper diſtance abaft the foremaſt, for the conveniency of hauling home the fore tack. It may therefore be drawn at the aft side of timber C, from the top of the side down to the upper edge of the channel wales ; and the fenders may reach from the top of the fide down to the upper edge of the main wales. As the fenders and cheſt-tree are on the outſide of the planks, wales, &c. the lines repreſenting the wales, &c. ſhould not be drawn through them.

Draw the ſteps on the side, which muſt be at the fore part of the main drift or break, making them as long as the diſtance between the upper and lower deck ports will admit of. They may be about six inches aſunder, and five inches deep, and continued from the top of the side down to the middle of the main wales.

In order to deſcribe the head, the height of the beak- head muſt be firſt determined, which may be about two feet above the upper deck. At that place draw a horizon­tal line, upon which ſet off the length of the beak-head, which may be 7 1/2 feet abaft the fore part of the ſtem, and from thence ſquare a line up to the forecaſtle deck ; which line will repreſent the aft part of the beak-head, and will likewiſe terminate the foremoſt end of the fore­caſtle. The length of the head may now be determined, which by the proportions will be found to be 15 feet six inches from the fore part of the ſtem. Set it off from

the fore part of the ſtem, and erect a perpendicular, which will be the utrnoſt limits of the figure forward : them take the breadth of the figure from the proportions, whhich is four feet four inches, and set it off forward ; and another perpendicular being drawn will ſhow the utmoſt extent of the hair bracket forward, or aft part of the figure. Then draw the lower cheek, letting the upper edge be welll with the upper edge of the main wales, and the after end ranging well with the beak-head line ; ſet off the depth of it on the ſtem; which is about 11 inches, and let a ccurved line paſs from the after end through the point on the ſtem, and to break in fair with the perpendiculaar firſt drawn for the length of the head, the fore part of the curve will then repreſent the poſition of the figure..

The upper cheek may be next drawn ; but, in order to know the exact place of it on the ſtem, the place of the main rail muſt firſt be ſet off on the ſtem, the upper edge of which may be kept on a level with the beak-head ; then ſetting off the depth of it below that, the place for the upper cheek may be determined, letting it be exactly in the middle between that and the : lower cheek : then, by drawing curves for the upper and lower edges of the cheek from the after end parallel to the lower cheek, to break in fair with the perpendicular, drawn for the back of the figure : then the upper cheek , will be formed. The upper part may run in a ſerpentine as high as where the ſhoulder of the figure is suppoſed to come, at which place it may be turned of with a ſcroll. The diſtance from the ſcroll to the heel of the figure is called the hair-bracket.

The head of the block may be formed by continuing the line at the breaſt round to the top of the hair-bracket, obſerving to keep the top of it about six inches clear of the under side of the bowſprit.

Having the diſtance ſet off on the ſtem for placing the main rail, it may next be deſcribed, keeping the bag of it as level as poſſible for the conveniency of the gratings, and letting the foremoſt end riſe gradually according to the riſe of the upper cheek and hair-bracket, ancd may turn off on the round of the ſcroll before drawn for the hair-bracket. To form the after end, ſet off the ſize of the head of the rail abaft the beak-head line, and erect a perpendicular ; then deſcribe the arch of a circle from that perpendicular to break in fair with the : lower side of the rail in the middle, and alſo another from the beak-head perpendicular, to break in fair with the up­per side of the rail at the middle, obſerving to continue the head of it ſufficiently high to range with the tim­ber heads above the forecaſtle.

The head timbers are next to be drawn, placing the ſtem timber its own thickneſs abaft the ſtem, and the ſoremoſt muſt be ſo placed that the fore side may be up andd down with the heel of the block or figure, which has not yet been ſet off. Take therefore the diſtance from the breaſt to the heel on a ſquare which is ſeven fet, and erect a perpendicular from the lower part of the lower cheek to the lower part of the upper cheek ; which per­pendicular will terminate the foremoſt end of thee lower cheek and the heel of the figure, and will alſo termi­nate the lower end of the hair-bracket : then, by conti­nuing the ſame perpendicular from the upper ppart of the lower deck to the under part of the main rail, the fore side of the foremoſt head timber will be deſcribed ; and by ſetting off its thickneſs aft, the other side may be drawn. The middle head timber may be ſpaced be­tween the two former ones ; and there may alſo be one