pletely about ſhould either bring to and wait for the next, or ſhould just keep ſteerage way ; thus the former weather- column ſhould wait for the centre, and both ſhould then wait for the former lee-column. In this evolution the wea­ther and lee columns will be interchanged. As some riſk may attend the execution of this at night, it is most advisable to tack the columns together, and sail in bow and quar­ter line ; becauſe, ſhould it become neceſſary to retack, or ſhould the wind change before the completion of this evo­lution, much confuſion might enſue. By tacking together this will be avoided.

To tack the columns together : The ſternmoſt ſhips of the three columns put in stays together ; and when they are obſerved to be ſo, their seconds ahead immediately put their helm down, and ſo on through the whole fleet. Each co­lumn will then be in Low and quarter line. See fig. 42.

To veer the columns in ſucceſſion : The leader of the lee­column veers round, and steers four points free upon the other tack, followed by the ſhips of that diviſion ; and of which, when he is clear of the ſternmoſt ſhips, he hauls up. The centre and weather columns perform ſucceſſively the same evolution, obſerving to continue standing on till they ſucceſſively bring the point at which the lee-column began to veer to bear in a right line to leeward of them. They likewiſe ſucceſſively ſpring their luffs when the point at which the lee-column hauled its wind bears right to leeward (fig. 43.) Each column having the same diſtance to run, if the evolu­tion be well executed, the leaders of the windward columns will find themſelves, when they spring their luffs, exactly a- breaſt of the leader of the lee-column, and so will all the other ſhips. But the making or ſhortening sail will at all events rectify the inequality of ſailing.

To turn to windward in the fifth order of sailing: Let the ſhips of the fleet be ſo arranged, that the leaders, and alſo the correſponding ſhips of the columns, may be in the di­rection of the wind; as by this means the fleet will gain more to windward, and at the ſame time be left liable to diſorder. Now the van ships of the columns tack at the same instant, and are followed in ſucceſſion each by the re­maining ſhips of the diviſion, when they reach the wake of their leaders, or the ſame point when they went about ; hence there will always be three ships in stays at the ſame time until the whole fleet has got on the other tack. The fleet then ſtands on any assigned diſtance, and then retacks in the ſame manner as before. See fig. 44.

To interchange the weather and centre columns: The wea­ther and lee columns lie to, or only keep ſteerage way. The centre column tacks together; and forming a bow and quar­ter line, goes cloſe-hauled to gain the wake of the weather­column ; it then retacks together, and ſtands on, while the weather-column bears away to its new ſtation in the centre, and the lee-column fills. See fig. 45.

To interchange the weather and lee columns: The centre column brings to ; the lee-column ſtands on under a preſs of ſail; and when its ſternmoſt ſhip can paſs to windward of the van of the centre column, which will be when the centre ſhip of the lee-column is in a line perpendicular to the di­rection of the wind with the van of the centre Column, the lee-column then tacks together, and ſtands on cloſe-hauled till it comes in a line with the centre column, when it goes large two points to get into the ſtation which the weather­-column left ; and then veers together, hauling the wind for the other tack. At the beginning of the evolution, the weather column bears away together under little ſail, and goes large six points on the other tack, ſo as to get into the wake of the centre column ; it then hauls to the former tack, going two points large, till it ranges abreaſt of the centre column, when it brings to, and waits for the new wea­ther column. See fig. 46.

To interchange the centre and lee columns: The centre and weather columns bring to, or keep ſteerage way, as is most convenient: the lee-column tacks together, and presses ſail to gain the wake of the centre column ; which, when they have effected, they retack together and ſtand on ; the centre-column then edges away under an easy ſail, steering, it it lay to, eight points from the wind, and if it kept ſteer­age way only two points, until it comes into the ſtation of the lee-column, where it hauls to the wind ; while the wea­ther-column fills and ſtands on : and the order is re- eſtabliſhed by ſhortening or making sail, according to circumſtances.

The weather-column to paſs to leeward : The weather­-column stands on under very little sail, while the centre and lee columns tack together, and carry a preſs or ſail till they reach the wake of the weather-column, when they retack, and crowd ſail till they come up with the weather-column ; and when they have gained the wake of the weather-co­lumn, it bears away two points, to gain its ſtation to lee­ward, and then hauls to the wind or brings to till the new weather and centre columns come up. See fig. 47.

The lee-column to paſs to windward: The weather and centre columns bring to, while the lee-column carries ſail and tacks in ſucceſſion as ſoon as the leading ſhip can wea­ther the headmoſt ſhip of the weather-column ; and when ar­rived upon the line on which the weather-column is formed, it re-tacks in ſucceſſion, forms on the same line, and either brings to or ſtands on under very little ſail. If it brings to, the other two columns bear away together two points, to put themſelves abreaſt of the column now to windward ; but if the new weather-column stood on tinder an eaſy sail, they may bear away only one point to gain their proper ſtations. See fig. 48.

As it is of the utmoſt importance that each ſhip be in her respective ſtation, both to preſerve order, and that the vari­ous evolutions may be more readily performed, the officer of the watch will therefore be ever anxious to preſerve the ſtation of his ſhip. This he may do by his quadrant ; but the more ready method for this purpose is by means of the Naval Square, which is conſtructed as follows :

Upon ſome convenient place at the middle of the quarter­deck, deſcribe the ſquare ABCD (fig. 49.), of which the ſides AD and EC are parallel to the keel ; through the centre line G draw the line EF parallel to AD or BC, and draw the diagonals AC and BD ; biſect the angles EGD, EGC by the ſtraight lines GH, GI, and the naval square will be conſtructed. Now ſince the angles FGD, FGC are equal to four points, being each half a right angle ; therefore the angles EGD, EGC are each equal to 12 points, and conſequently the angles EGH, EGI are each equal to six points. Hence, if a ſhip is running cloſe hauled on the ſtarboard tack, in the direction FE, the direction of the wind will be IG, and her cloſe-hauled courſe on the other tack will be GC : But if she be running in the ſame direction FE upon the larboard tack, her cloſe hauled courſe on the ſtarboard tack will be in the direction GD.

In order now to apply the naval ſquare to the keeping of ships in their reſpective ſtations, let the fleet be formed in the fifth order of ſailing cloſe-hauled, the correſponding ships of the columns coinciding with the direction of the wind, in order to turn to windward with greater facility. The correſponding ſhips in the column must be kept in the direction of GH, or GT, according to the direction of the wind and the tack they are upon, while all the ſhips of