ther-line, bearing directly down, have it only in their pow­er to uſe their bow-chaſes. This method of attack ap­pears, therefore, to be the worſt poſſible for the weather­fleet, and the moſt advantageous for the lee fleet. For suppoſe a ſingle ſhip of 80 guns to windward at 13 (fig. 65.), diſcovering an enemy’s ſhip of equal force to leeward at F, to bear directly down upon her endwiſe, the receiving ſhip F, by lying to as in fig. 66. would preſent a broadſide of 40 heavy guns bearing upon B during a courſe of two miles, in which every ſhot might take effect ; while B, in this poſition, would have it in her power to bring only the two light guns of her forecaſtle or bow-chase to bear on F ; a diſadvantage greatly exceeding twenty to one. Beſides, the receiving ſhip F, by lying broadside to, will have all her masts and rigging more open, and conſequently will allow ſhot to paſs with leſs effect than the ſhip B, which, coming endwiſe, is liable to be raked by every ſhot from ſtem to ſtern. The conſequence of which muſt be, that B would be diſabled in her rigging, &c. long before ſhe could arrive at a proper poſition for annoying F ; and when ſhe had attained that poſition, F, by being entire in her rig­ging, would have it in her power to fight in any poſition, or to make off at pleaſure.

The method then is, B having the wind, ſhould run down aſtern, as *per* dotted line, and getting into the courſe, or near the wake of F, or a poſition that will bring her paral­lel to the courſe of F, at a proper diſtance, ſhe ſhould then run up cloſe alongſide of F, upon equal terms, as in fig. 67; or otherwiſe, on ſhooting ahead, ſhe may veer, and run down on the weather-bow of F, as in fig. 68. till ſhe ſhall force F to bear away to leeward, keeping cloſe by F on equal terms ; but during the courſe, in both cases, carefully watching that F may not have it in her power to bring her broadside to bear upon B without retaliation.

It having been often ſaid that the French have made it a rule to throw the whole effect of their ſhot more particularly into the rigging of their enemy, and that the Britiſh, on the other hand, have been as attentive to point the force of their fire against the hull of the ſhip ; it may be proper here to ſtate the two cases, and compare the effect.

Let us ſuppoſe a ſhip of 80 guns wiſhing to avoid the effects of a cloſe engagement, but at the same time lying to as at F (fig. 63.), intending to receive, with every advan­tage, an enemy B of equal force, coming down with an in­tention to fight her ; and let us ſuppoſe that F, by aiming her fire at the rigging of B, ſhall have carried away any of the principal ſtays, eight or ten windward ſhrouds, or a fore- topmaſt, or any other rigging, though of much leſs conſe­quence, but, at the ſame time, without having wounded a single man of the ſhip B ; and suppoſe a second ſhip, con­fort to F, receiving ſuch another ſhip as B, and by firing at her hull only, ſhall, without other damage, have killed 30 or 40 of her men : In this critical juncture, when F and her consort are deſirous of avoiding a cloſe engagement, it is evident that the ſhip at B, which has lost part of her rig­ging, is more completely diſabled from cloſing with them than the other ſhip, whose rigging is entire, though ſhe may have loſt 100 of her men.

It has been often ſaid, that ſome particular ſhip has been expoſed in battle to the cannonade of three, four, or even five ſhips, all-extended in the enemy’s line, and all bearing upon her at one and the ſame time ; but this can never have been the caſe, but when the ſhip ſo expoſed was at a very great diſtance. Let I, H, F, H, I, (fig. 70.) repreſent five ſhips extended in line of battle ahead at the diſtance of one cable’s length, or 240 yards, from each other; let the length of each ſhip be 10 yards, ſo that the whole ſpace between head and head of any two adjacent ſhips is 280 yards ; and let the perpendicular line FK, proceeding right out from the beam of the middle ſhip F, to the diſtance of six cable’s length or 1440 yards be divided into six equal parts : It is evident, from inſpection, that a ſhip ſtationed at the point E of the line FK, 720 yards diſtant, cannot for any length of time be exposed to the fire of more than the centre ſhip F or the fleet I, H, F, H, I. For ſuppoſing the ſhips H, K, ahead and aſtern of F, to be able to bring their broadſides to bear on E (a ſuppoſition which, if the line be cloſe-hauled, cannot be made of the headmoſt of thoſe ſhips), it is evident, that by putting themſelves in poſitions proper for that purpoſe, the ſhips H, H, will not only disorder their own line, but alſo leave, the one her head, and the other her ſtern, expoſed to a raking fire from their oppoſites B, B, in the enemy’s line.

But if the opponent ſhip cannot well be expoſed to the fire of the two ſhips H, H, at the point E, ſhe muſt be still leſs expoſed at the point C, 480 yards diſtant ; and it will be almoſt impoſſible for the ships H, H, to touch her at the point G, 240 yards, or one cable’s length, diſtant

But one cable’s length aſunder is too ſmall an allowance for accidents that may happen by the ſhips I, H, F, H, I, extended in line of battle ahead. Therefore let us ſuppoſe the three ſhips, which are said to be at once upon a single opponent, to be ſtationed at I, F, I, at the diſtance of two cable’s length or 480 yards from each other. Then it is evident that the opponent ſhip cannot now be more expo­ſed at the point K, at the diſtance of 1440 yards, than ſhe was, on the former suppoſition, at the point E, 720 yards diſtant ; and if we ſuppoſe the line of battle to be formed at one and an halt cable’s length aſunder, ſhe muſt be at L, diſtant 1080 yards, before ſhe can be annoyed even to this degree by the three hoſtile ſhips at once. Hence we may fairly conclude, that if one ſhip has any time been expoſed at once to the fire of five, four, or even three ſhips of the enemy’s line, such ſhip muſt have been at a very great di­ſtance, and in no great danger.

Having finiſhed the above obſervations, our author pro­ceeds to the principles neceſſary to be known for enabling us to judge of the different modes of bringing great fleets to action. For this purpose he ſuppoſes a fleet of 10, 20, or more ſhips, of 80 guns each, extended in line of battle to leeward, and lying to at F (fig. 71.), with the intention of avoiding an attack ; whilſt another fleet at B, of equal number and force of ſhips, alſo extended in line of battle, three or four miles to windward, is deſirous of making an attack, and coming to cloſe action on equal terms with the fleet F. In this diſpoſition of the two fleets, ſhould that to windward run down headlong ſhip for ſhip on its oppo­nent, as in figs. 66. and 69. it is evident, from what has been ſaid in the beginning ot this chapter, that each indivi­dual ſhip of the weather-fleet might be completely diſabled before it could poſſibly come to cloſe action with the fleet to leeward. But let it be suppoſed that the commander of the weather fleet B, though his ſhips have been much diſ­abled in their rigging during their courſe *a a a* from wind­ward (fig. 72.),has made them bring to at a great diſtance, from whence he can hurt F ; is it to be expected that F, whoſe deſire has always been to avoid a cloſe engagement, and who has already disabled the ſhips of B, will patiently lie ſtill, or wait until B shall have time to disable him in his turn ? No ſurely. While enveloped in his own ſmoke, as well as that of his enemy, he will bear away unhurt to a new station G, and there remain out of the reach of B’s cannon-ſhot, who muſt repair his rigging before he can at­tempt a second attack.

Again, ſuppose that B, in place of going headlong and endwiſe down, were to run down in an angular courſe, or