ceed until the two diſtances carried forward meet as at C, and a curve deſcribed through the points A, 1, 2, 3, &c. will repreſent nearly the curve of purſuit ; and the leſs the interval A1 is taken, the more accurate will the curve be formed. In this particular caſe the length of the diſtance BC may be found as follows, provided the diſtance AB and the proportional velocities of the two ſhips be known.

Let the velocity of the chase be expreſſed by a fraction, that of the chaser being unity. Multiply the given diſtance AB by this fraction, and divide the product by the com­plement of the square of the same fraction, and the quotient will be the diſtance run by the chase E. Let AB, the di­stance of the chase directly to the leeward of the purſuer, be 12 miles, and the velocity of the chase three-fourths of that of the chaser ; the diſtance to be run by the chase be­fore ſhe is overtaken is required ?

Now (12 × 3/4)/[(1- (3/4^2)] = 9/(7/16) = 9 × 16/7 = 20 4/7 miles ; and since the velocity of the purſuer to that of the chase is as 4 to 3 : hence the diſtance run by the chaſer will be = 20 2/7 × 4/3 = 27 3/7 miles.

As the purſuer alters his courſe at every point, and since it is preſumed his ship will ſail better with the wind in one direction, with reſpect to her courſe, than in another, her velocity will therefore be different at different points of the courſe. Thus ſuppoſe her to ſail faſter when the wind is up­on the quarter, her velocity will conſtantly increaſe until ſhe has attained a certain point, and then it will decreaſe : hence in real practice this curve will not be preciſely the same as above, and of courſe the meaſure of BC will differ a little from the preceding determination. The inveſtiga­tion of the foregoing rule is in Simpſon’s Fluxions, p. 516.; and the application of the curve of purſuit in Sir George Pococke’s engagement in the Eaſt Indies in the year 1758, is given in Clerk’s Essay on Naval Tactics, p. 160. It must be confessed, however, that Mr Simpſon’s inveſtigation, though a pretty ſpecimen of mathematical inveſtigation, proceeds on certain phyſical aſſumptions, which are by no means ſanctioned by experience. See what has been said of theſe aſſumptions and principles in the articles *RESISTANCE of Fluids,* and Seamanship.

Hitherto we have conſidered chasing in the caſe of single ſhips only; the ſame rules are alſo applicable to fleets: we ſhall, however, ſubjoin the following remarks with reſpect to chasing as practiſed by fleets.

If the whole fleet is to give chaſe, the admiral will make the proper signal ; and then each ſhip will inſtantly make all the sail poſſible. If the retreating fleet is not much inferior to the other, a few of the faſteſt ſailing vessels only are to be detached from the victorious fleet, in order to pick up any ſtragglers or thoſe ſhips which may have fallen aſtern; and the remaining part of the fleet will keep in the same line or order of ſailing as the retreating fleet, ſo that they may, if poſſible, force them to action. But if the retreating fleet is much inferior, the admiral of the ſuperior fleet will make the signal for a general chaſe; and then each ſhip will immediately crowd all the ſail poſſible after the retreating fleet ; or, if the chaſe be still leſs numerous, the admiral will detach one of the ſquadrons of his fleet, by hoiſting the pro­per signal for that purpoſe, and he will follow with the re­mainder of the fleet. The ſquadron that chases, or the crusers detached from the fleet, ſhould be very careful not to engage too far in the chaſe for fear of being overpowered; but at the ſame time to endeavour to ſatisfy themſelves as much as may be in their power with regard to the object of their chaſe. They must pay great attention to the admi­ral’s signals at all times; and in order to prevent ſeparation, they ſhould collect themſelves before night, eſpecially if there be any appearance of thick or foggy weather coming on, and endeavour to join the fleet again. The ſhips are diligently to obſerve when the admiral makes the signal to give over chaſe ; that each regarding the admiral’s ſhip as a fixed point, is to work back or make ſail into her ſtation, to form the order or line again as expeditiously as the na­ture of the chaſe and the diſtance will permit.

When a fleet is obliged to run from an enemy who is in fight, it is uſual to draw up the ſhips in that form or order, called the *order of retreat,* which has been already deſcribed; and the admiral, when hard purſued, without any probability of eſcaping, ought, if practicable, to run his ſhips aſhore, rather than ſuffer them to be taken afloat, and thereby transfer additional ſtrength to the enemy. In ſhort, no­thing ſhould be neglected that may contribute to the preservation of his fleet, or prevent any part of it from falling into the hands of the conqucror.

Pakt II. NEW SYSTEM of NAVAL TACTICS.

WE have now laid before our readers as comprehenſive a view as the limits prescribed to ſuch articles will permit of the various evolutions uſually practiſed by fleets in naval war. Though we have tranſcribed liberally from the most approved writers on the subject, we doubt not but the ſcientific officer will perceive that we have compiled aukwardly and unſkilfully: but we are not ſeamen ourſelves; and the generoſity of British officers will pardon the blun­ders into which mere literary landsmen could hardly avoid falling. The young ſeaman, who has the noble ambition to excel in his profession, will conſult the authors whom we have mentioned in our introduction, in whoſe works he will find our deficiencies amply ſupplied ; but that the preſent article may be as complete as w*e* can make it, a view muſt be given of the ſyſtem of tactics propoſed by the Viſcount de Grenier and our countryman Mr Clerk ; because, whether theſe ſyſtems ſhall ever be adopted or not, they are the offspring of ingenuity, and as ſuch merit attention.

Chap. I. Vi*ew of De Cremers Tactics.*

Of all the orders, that of battle is the moſt important in naval tactics ; but the order of battle which was firſt formed in the laſt century by the Duke of York, and has been con­tinued in uſe to the preſent day, the Viſcount de Grenier thinks extremely defective. Various cauſes may conſpire to render the taste of breaking it not difficult. Its great ex­tent muſt make it no eaſy matter for the admiral to judge what orders are proper to be issued to the ſhips ſtationed in its extremities ; whilſt his ſignals, however diſtinctly made, are liable to be miſtaken by the commanders of thoſe ſhips. The extremities of a long line are neceſſarily defenceleſs, eſpecially if it be to leeward ; because, after it is formed, the enemy may throw himſelf with a ſuperior number on its van or rear, and put that ſquadron to flight before aſſiſtance can be ſent to it from the other ſquadrons. Theſe defects the Viſcount de Grenier thinks may be remedied by