battle, this is called the *natural order of battle ;* and when c *d* and *e* *f* are to windward of *a b,* this is called the *inverted order of battle.* The former of these is calculated for a fleet combating to leeward, and the latter for a fleet which must fight to windward.

To explain the advantages of these dispositions, let us suppose the line AB, CD, EF, fig. 39, to repre­sent an enemy’s fleet to windward in the usual order of battle, on the close-hauled line, and on the starboard tack ; and let *a* *b* be one of the divisions of a fleet disposed according to the now natural order, on the starboard tack, while the lines *c* *d, e f* represent the other two divisions standing on chequerwise on the same tack, but formed on the opposite close-hauled line. When the enemy comes to attack this latter fleet on a supposition that it is inferior to their own, their divisions AB and EF, in order to attack the ships *a* or *b,* must bear away. Now, to prevent the attack, each of the divisions c *d, ef,* must make the following evolutions, according to their respective situ­ations and the manœuvres of the enemy. 1. The ships of the division *a b* are to slacken as much as possible their headway, and form a very close line, till the enemy makes a movement to attack the headmost or sternmost ship of that division. 2. The ships of the division c *d* are to make sail till they come under the second or third ship of the rear of the line of battle *a b,* when they will take the same sail as the ships of that division, to preserve that position until the hostile ships make their evolution to attack the rear ships of that division. In this situation the ships of the di­vision c *d* will be able to observe the manœuvres of the enemy, in order to change tack, and form themselves in or­der of battle on the opposite board as soon as the hostile ships shall have run over a certain space ; because thc ships of the division *c d,* steering afterwards close hauled in the wake of the sternmost ship of the division *a b,* will be able to cover the rear ships of that division, and get the wea­ther-gage of the hostile divisions which are bearing away ; rake their ships ; run alongside of them ; double their rear­guard, and put it between two fires, if those hostile ships are following in the wake of each other ; divide it if they bear away chequerwise ; or gain to windward, and put be­tween two fires the enemy’s division CD, while engaged with the division *a b.* 3. The division e *f* may abandon their post, and run chequerwise under a press of sail, as soon as the enemy falls ahead of *a b ;* that if the enemy’s divi­sion AB attempts to fall on *e f* or on the van of *a b,* they may, by going about, steer in order of battle close hauled on the opposite line, and cover the ship *a,* double the hos­tile division CD ahead, or divide AB, which is running chequerwise on the opposite tack.

Fig. 40 marks another method of manoeuvring by the di­visions *c d, e f* when the enemy’s ships are arranged in a single line not well formed.

Figs. 41 and 42 illustrate De Grenier’s method of placing the admiral’s ship, and the frigates and transports at­tached to a fleet. A, fig. 41, is the admiral placed a­head of the fleet, at a short distance from the headmost of the second division, and in the same di­rection of the wind as the headmost ship of the first divi­sion *∙, ff* are two frigates observing the same rule and posi­tion with respect to the van ship of the third, and rear of the first division. When the fleet is in order of battle, as in fig. 42, the admiral’s ship A is in the centre of the lozenge, and two of the frigates, *f f,* are on the fourth side of the lozenge. The transports and store-ships, when the fleet is in order of sail­ing or convoy, occupy the space circumscribed by the lo­zenge, but in order of battle they are disposed in a line opposite to that of the enemy.

For a full exposition of this system, we must refer to the original work, entitled *L’Art de Guerre en Mer, ou Tac­tique Navale,* &c. par M. le Viscompte de Grenier, or thc extracts from it contained in the *Elements and Practice of Rigging and Seamanship.*

We must now turn our attention to the improvements in tactics suggested by our countryman Mr Clerk ; improvements which have received the approbation of several dis­tinguished officers of the navy, and to hints derived from which we are in a great measure indebted for some of the most signal victories which have reflected new honour on the naval power of Britain.

Before entering on an explanation of Mr Clerk’s tactics, we must briefly state his objections to the usual method of bringing ships to action, by the weather ship or fleet steer­ing directly down upon the enemy. By doing this, the enemy to leeward often has an opportunity of completely disabling the ships making the attack, as the former can use all their guns on one side, while the latter can only use their bow chases. Suppose B, fig. 43, to re­present a ship of eighty guns to windward, in sight of an enemy’s ship of equal force F to leeward. Now, if B bears down directly upon F, the latter, by lying to, as in fig. 44, will present a broadside of forty guns, all bearing for a considerable time on B, while the latter coming down headwise, can only bring the two light guns of her forecastle to bear on F, not to mention that F, by lying broadside to, will have her masts and rigging little exposed to the ene­my’s shot, while B, standing head on, is ex­posed to be raked by every shot from F, and in particular her rigging is in the utmost dan­ger.

Instead of this objectionable mode of attack, Mr Clerk proposes that B, having the wind, should run down astern as in the dotted line at fig. 45, till she gets into the course of F, near her wake, or in such a position