

HOW BATTLES AT SEA ARE FOUGHT

By Admiral Sir Reginald Bacon, in "War Weekly"

Admiral Bacon has a permanent niche in the history of Britain. He commanded the Dover Patrol during the last war.

A BATTLE at sea is fought to further the general strategy of the war, not to hinder it. People are apt to think that a war is won by fighting battles. This is not necessarily so.

War is won by strategy, the strategy being fortified and carried to its proper conclusion by the aid of battles and the threat of armed forces. In fact, a war may be won without a single battle being fought at sea. A war may be lost through the waging of a battle at the wrong moment with inadequate forces, or through untempered ardour or faulty dispositions.

It may be useless from a strategical point of view to risk the almost certain loss of a ship by engaging a greatly superior enemy; but, on the other hand, it may be strategically imperative to fight and attempt to disable an enemy's ship even if your own ship be lost in the encounter. A captain should, under proper circumstances, have no more hesitation in refusing to fight an action than he would have to engage an enemy at close quarters.

For instance, in the case of the *Admiral Graf Spee*, it would have been well worth the loss of two of our cruisers in order to damage that commerce raider sufficiently to give time for our reinforcements to arrive and complete her destruction.

Armaments in Modern Ships

Let us examine the elementary principles that govern an action between two reasonably equal naval forces. But, as a preliminary step, we must consider the disposition of the armaments of modern ships.

In Fig. 1 we have a ship with two heavy gun turrets. These are installed on

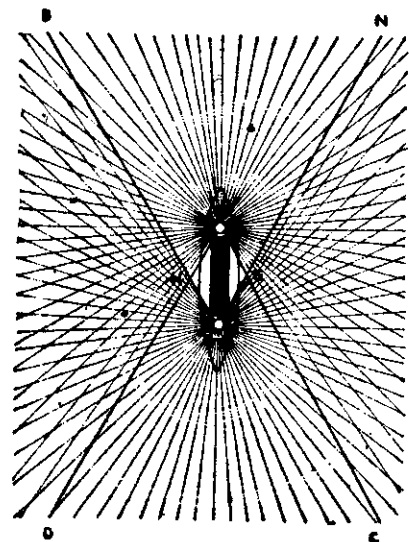


Fig. 1

the centre line of the vessel so as to be fired at will equally well on either beam. One is placed in the fore part of the ship with an uninterrupted arc of fire ahead, the other in the after part with a similar arc astern.

In the centre of the ship rises the superstructure, a necessary erection for navigation, ventilation, housing of funnels, etc. This unavoidably prevents the fore turret from firing right aft, and the after turret from firing right forward.

In fact, generally speaking, the fore turret can only fire some 60 degrees abaft the beam, and the after turret for a similar angle before the beam. It will be seen that by this arrangement there are two segments BHD and NEC over which both turrets can fire.

Before or abaft the limits of these segments one turret only can be brought to bear on an enemy. It is for this reason that normally an action is fought with the opposing ships abeam of each other, or, at all events, within the limits of the arcs over which both turrets can fire.

It is hardly necessary to remark that the same general principle applies whatever may be the number of turrets mounted in a ship.

Axioms in Naval Tactics

There are two general axioms in tactics, and one over-riding proviso.

1. A broadside action can be forced by either side, whether the opponent desires such a method of fighting or not.
2. That the range at which the action is fought is determined by the ship which has the greater speed—and the general proviso prescribes that the ship's direction should be kept in as steady a line as possible so as not to upset the aiming of the guns.

Let us take each of the two axioms in turn. Take two ships A and B (as in Fig. 2).

A wishes to keep the other on her beam. She can do so by turning on the arc of a circle of smaller radius than that followed by her opponent. However fast B may steam she can never succeed in her attempts to get ahead of A.

A, by a gentle swing under helm can keep her abeam. While doing so the faster ship can close or open the range

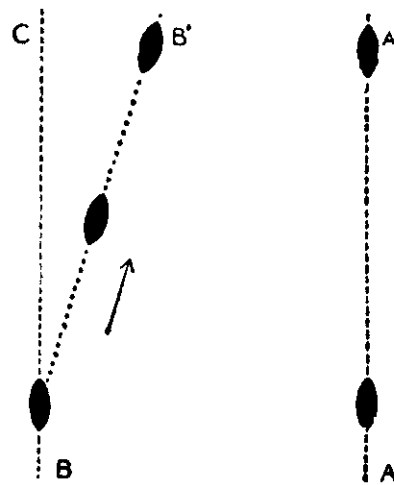


Fig. 3

at which the action is being fought by the simple expedient of turning slightly towards or away from her opponent, as shown in Fig. 3. She can steer in and close to B instead of keeping a constant range by steering to C. The difference in length of BC and BB is proportionate to the increase in speed necessary to carry out this manoeuvre.

In Fig. 4 A can of course steer towards or straight away from B, but in so doing she halves her gunfire, since one turret only will bear on B, while B keeps both turrets firing at A.

It is for the above reasons that an action between two equal forces is bound to resolve itself into a broadside engagement. This is true for both single ships, as well as for fleet actions. The faster ship will choose the range best suited to its armament, but the ships will remain approximately abeam.

Actions in these days are fought at any range between 8,000 and 20,000 yards (that is to say, between $4\frac{1}{2}$ and $11\frac{1}{2}$ land miles). At the battle of the Falklands Islands, Admiral Sir Doveton Sturdee had ample speed and sufficient hours of daylight. He, therefore, chose a range that enabled him to fight his two ships outside the effective gun-range of his two opponents.

Other things being equal, the greater the accuracy of fire of a ship—in other words the greater her gunnery efficiency—the longer is the distance at which

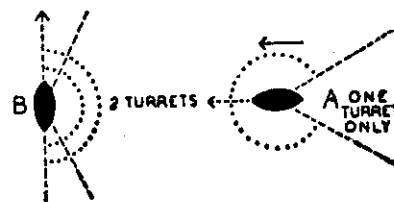


Fig. 4

an action can be fought. But there are two important considerations that limit the maximum distance—namely, visibility, and the hours available in which to fight the action. In thick weather the battle range is necessarily reduced to the distance at which the enemy can be distinguished. This, to a great extent, levels

out any superiority in gunnery efficiency that one ship may have over the other.

The Time Factor

The time that is available for fighting an action may have a far-reaching effect on tactics. If a short time only is available, and should it be imperative to disable or sink the enemy, then a close action may become a necessity.

In such a case gunnery training is largely thrown away and the result will lie in the lap of the gods. A wise admiral will strive his utmost to avoid so uncertain an encounter. For similar reasons a night action should be avoided whenever possible.

Although the hours of actual daylight may be insufficient to force a definite conclusion to the conflict without sacrificing gunnery superiority, yet clearness of weather coupled with a moon may rightly cause an admiral to avoid an indiscriminate bull-at-the-gate fight, provided he is confident that, during the night, he will not lose touch with his opponent, and that he will be in a position to continue the engagement on the following day.

Diagram 5 shows a fast ship B trying to circle round a slower opponent A, in

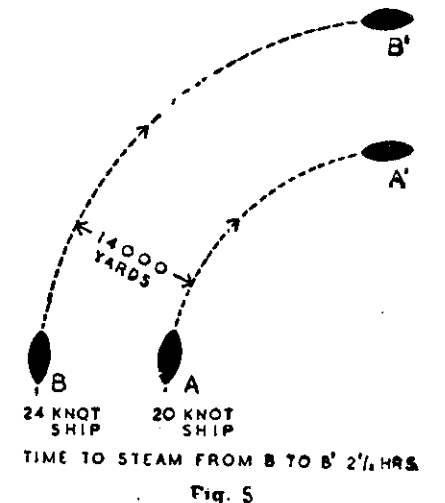


Fig. 5

order to get into a better position as regards the sun. A little simple arithmetic will show that the 24-knot ship will have to steam for $2\frac{1}{2}$ hours before changing her relative position from that of B to the one at B1.

State of the Sea

The state of the sea is likewise of importance. If a fairly heavy sea is running the accuracy of fire of the guns in the forepart of the ship is likely to be hampered by the sea breaking over the bow and forecastle. This is particularly the case if the high up control positions have been damaged and low control only remain.

On the other hand, the afterpart of the ship is undisturbed by such conditions. A ship pursued by a stronger one might well make the most of such an advantage by running away from her opponent, head to sea; even if this should take her off her desired course.