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A MEETING OF THE PORTSMOUTH NAVAL WAR GAME SOCIETY IN THE NELSON ROOM AT THE "GEORGE," PORTSMOUTH.

The Naval War Game and How it is Played.

BY ANGUS SHERLOCK.

(NOTE.—This is the only popular article that has ever appeared on the Naval War Game, though it is played in every navy in the world. The subject is of some special interest just at present, because both the Japanese and Russian navies trained on it for the present war. Proofs of the article have been submitted to the inventor, who himself selected the illustrations.)

FROM time to time one reads in the technical naval Press brief references to, or fixtures for, the Naval War Game. At rare intervals a "war-game battle" will be found described at length in some of the Service journals, but beyond this it is safe to say that the game is a mystery to the general public. The reason is, in part, that it touches technical questions that are caviare to the million, but as much, or more so, it is mysterious on account of the secrecy with which many of its details are guarded. It is open to the public to purchase the "game," it is true, but, though the material and plenty of directions can thus be secured, it is by now well enough known that many unpublished "confidential" rules exist.

These, it may be noted, differ in every navy. The problems of naval warfare and the ideals of facing them are not the same for a Russian as for an American, and Sweden and the Argentine Republic again have nothing in common in their naval

aspirations. However, were I in a position to divulge these matters they would not be of any great interest to readers of *THE STRAND MAGAZINE*, so I propose to confine myself as much as possible to things in which the human interest is the dominant factor.

First, however, some description of the game and its invention may be of interest. The naval war game reached its fruition some five years ago, but Mr. Fred. T. Jane, its inventor, always asserts that he began to think it out when he was a small boy at school.

"When I was a small boy," said Mr. Jane, "I had the boat-sailing craze. A school-fellow had a better boat than I; I mounted a gun in mine and committed an act of piracy on a duck-pond. My chum was a sportsman, and, after punching my head, proceeded to arm his ship also. We took to armour-plates made from biscuit-tins, and to squadrons instead of single ships. In the battle that ensued our fleets annihilated each other, and depleted finances forbade their

renewal. Then it was that the economy born of necessity caused me to think that make-believe battles would be cheaper. Thus was the naval war game evolved in embryo. At first we fought with imaginary leviathans, but after a time such impossible vessels were claimed that we decided to simulate nothing but existing ships.

"A year or so later I read in some newspaper that a fortune awaited the man who could invent something that could be applied to ships as the land *Kriegspiel* to armies. I thought I could do with that fortune, so packed the game in an empty Australian beef-tin and sent it to the Admiralty, together with a letter in which the following magnificent sentence occurred: 'I shall not be above accepting financial remuneration, and for convenience this can be paid in instalments.'

"In due course 'My Lords' returned the game with thanks. They had 'inspected it with much interest,' they said.

"Somehow I doubt it. After the lapse of many years I still remember vividly the smell of that old meat-tin in which the game was sent to them.

"My next step was one which is, I believe, chronic with disappointed inventors. I wrote letters to the newspapers attacking Admiralty policy in general, with a view to making the callous authorities tremble! I never witnessed the trembling, but as out of this campaign I grew into what is called a 'naval expert,' I suppose I owe the Admiralty a debt of gratitude! However, that is another story.

"Meanwhile, war game languished, till some seven years ago it was found by accident in a lumber-room. Even then it was resuscitated only as a toy. I used to take it to the *Majestic*, and it was played there very much *à la* ping-pong, till one day the captain, Prince Louis of Battenberg, asked about it, and wished to see the rules.

"Feeling somewhat of a fraud," says Mr. Jane, "I hastily recast the thing into its original serious mould, plus a variety of improvements that occurred to me, or were suggested by various naval friends.

"The game was then played in the *Majestic* once more, and 'caught on.' To my astonishment I was deluged with letters asking about the game. The first came from the Grand Duke Alexander of Russia, the Czar's brother-in-law, who, with that absence of 'side' so characteristic of the Romanoffs, wrote himself as a naval officer. He had, he told me, himself invented a naval war game,

the strategical part of which was successful, but the tactical not what he had hoped for it. If mine were satisfactory, he would do all he could for it.

"That is how the game came to have its Imperial and Royal 'godfathers,' as announced on the title-page. Royal sailors are usually regarded as mere ornamental dummies, but both the Grand Duke Alexander and Prince Louis of Battenberg were responsible for many excellent improvements in the game, for which I, perhaps, have received the credit.

"There were two other godfathers—Rear-Admiral H. J. May, of the British Navy, and Captain Kawashima, of the Japanese Navy. The former expended endless labour in revising the rules; the latter it was who played with me all the early experimental games to test the rules, and alter them when necessary to make practice as simple as possible. We used to fight little one-man 'wars,' beginning at about ten in the morning and carrying on till after midnight. Captain Kawashima is now in command of the *Matsushima* (the famous cruiser that was flagship at Yalu in the Chino-Japanese War), and when I remember the painstaking enthusiasm he used to put into the 'wars' he and I had, I think that he will go far in the present war.

"A lecture at the United Service Institution followed the *Majestic* battle, and thus the game 'took root.' It is in every navy in the world now."

About this time a foreign Government approached the inventor with a view to purchasing the game and its secret. The offer was declined, but Mr. Jane gave a similar option to the British Admiralty, which, however, made no reply whatever beyond an official acknowledgment of the receipt of the letter. Perhaps, like Mr. Jane, the Permanent Secretary remembered the old meat-tin!

After an interval the game was produced—the very first set to be sold being secured by, of all people, the Chinese! This particular set later on helped to make history; indeed, it has been seriously surmised that it caused the Chinese attack on the allied fleets at Taku. After that affair a British landing party found the ground inside one fort littered with war-game models, each model ship being stuck full of pins. The leader of the party being a war-game player followed up his find, to discover a shed laid out for naval war game and "scorers" * of all the allied fleets in various stages of destruction!

* For particulars of "scorers" see later.

The Chinese had apparently worked out things by war game before opening fire. They had, however, made one little mistake—they had made no allowance for the allied fleet firing back!

Following China, the United States, Germany, Russia, and Japan secured early sets, and a little while afterwards the British War Office. That much-abused department was, curiously enough, the very first to recognise the utility of the game for the chief purpose its inventor designed it for—the teaching of the guns and armour of possible enemies. It was procured for the use of artillery officers in sea forts, and in his last report Lord Roberts emphasized the vast difference between those officers who had played the game and those who had not. The former knew the weak points of every possible

in at various angles which indicate the arcs of training of the corresponding guns in the real ships, while long pins mark the bearings of the torpedo tubes. Other pins, fitted with delicate little military tops, make the masts; and, to digress a moment, hereby hangs a tale.

One of the earliest experimenters with the naval war game was the ubiquitous Kaiser. He took to it keenly, and himself played it often with his admirals. One day, so runs the story in the German Navy, the Kaiser was winning hand over fist, his fleet, led by his flagship, bearing down upon the enemy. Excitement was high, when at the critical moment the Kaiser's fleet suddenly disappeared!

The Kaiser gazed at the deserted board and then at his admirals. An "awkward



From a Photo. by]

A STANDARD NORWEGIAN NAVAL WAR-GAME SET.

[Symonds & Co.

enemy; the latter, on hearing the name of any ship, could not tell whether she were a battleship or gunboat, dangerous or harmless. Every War Office has since followed suit in adopting the "Kindergarten war system."

And now for some account of how the game is played. A large table is the primary requisite. This is covered with blue cards divided into a multitude of little squares, each of which represents half a cable—that is to say, a hundred yards. Over these squares are moved the pieces—model ships on the same scale as the board.

These models are a most important part of the game. They are made of cork, painted, and most accurate representations of actual ships; and this they need to be, for the players have to recognise them. Each model is fitted with tiny guns—little bits of wire set

pause" is said to have ensued, and the writer for one can quite believe that. It is undoubtedly an awkward thing to seem to have played tricks with an Emperor so as to cheat him out of victory.

"Where is my fleet?" asked the Kaiser.

"I do not know, sire," exclaimed his chief opponent, a famous admiral.

He saluted as he spoke, and thereupon there fell to the floor, apparently from down the admiral's sleeve, three of the missing warships! What the admiral felt is better imagined than described.

Fortunately for his reputation one model still remained stuck in his sleeve. In moving his own ships he had rested his arm on the Kaiser's vessels, and so lifted the lot unawares. All's well that ends well, and the Kaiser laughed most heartily; but there is

an admiral in the German fleet whom it is in no way wise to talk to about naval war game.

However, this admiral is not the only one who has met misadventure from war-game models, no less a person than the Japanese Admiral Togo heading the list of those who have had "naval war-game hand"—the result of inadvertently leaning on the masts of a model ship!

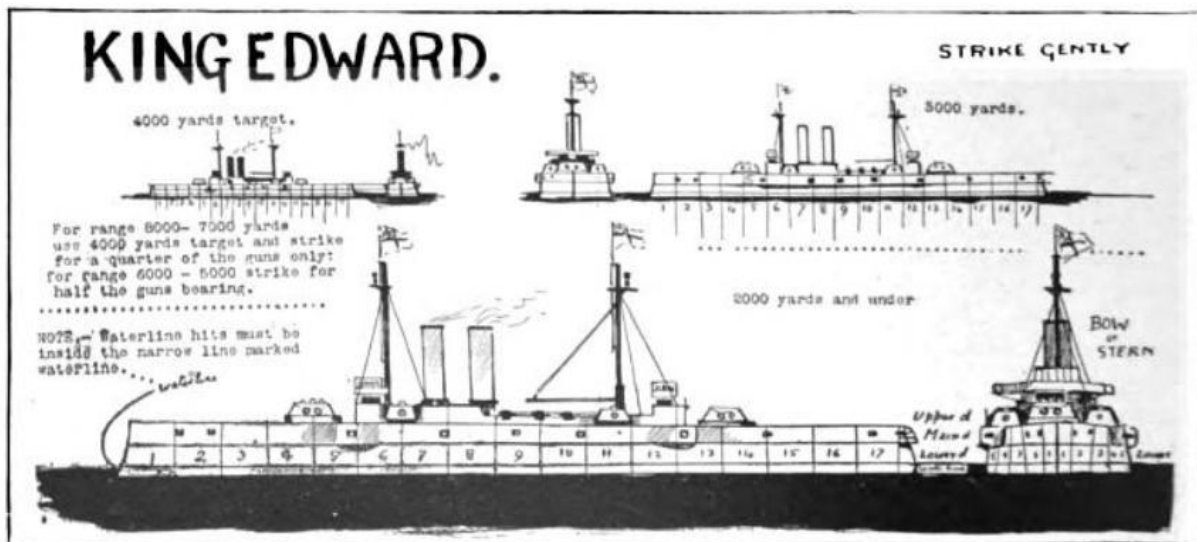
To resume the description. Every player has assigned to him a particular ship, and this he moves simultaneously with all the others at the direction of his "admiral." Each move nominally occupies a minute of time—actually it usually takes more, and it is in the ways and means adopted to balance this that most of the confidential rules exist. A most essential part of the game is to counterfeit with all possible realism the hurry-scurry of an actual battle.

The distance moved depends, of course,

are alone made—and here, of course, confidential features are thick. The inventor of the game is probably the repository of more secrets in this respect than three of the best Naval Intelligence Departments of Europe put together.

At the end of each "minute" more firing takes place. This is the characteristic feature of the game. Each player has a card with a plan of his ship showing guns, armour, etc., and divided into arbitrary vertical sections of twenty-five feet each. This card is known technically as a "scorer." Pictures of each ship, similarly divided, but showing no armour, and of different sizes for different ranges, are also provided. These are the "targets."

They are struck at by "strikers," which at first sight are rather like ping-pong bats with a pin in them.* This pin is nearly, but never quite, in the centre of the striker. To



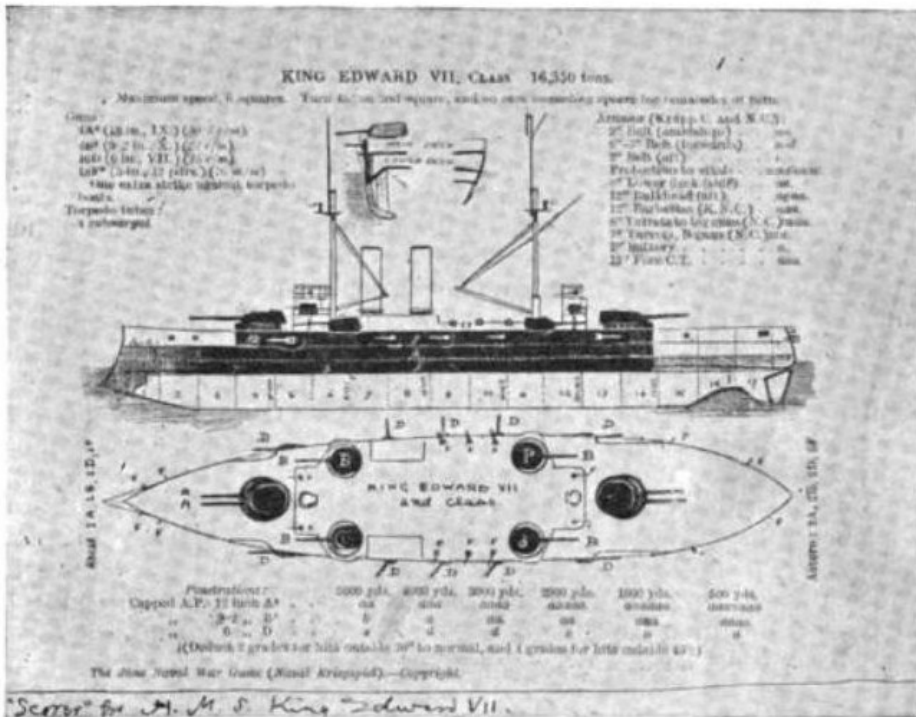
A NAVAL WAR-GAME TARGET—ACTUAL SIZE.

upon the speed of the ship represented. A flier like H.M.S. *Drake*, for instance, can cover as many as eight squares should full speed be ordered. This means eight hundred yards a minute—equivalent, approximately, to a speed of twenty-four knots per hour. In actual practice the ships do not move by squares, else a vessel proceeding along the diagonals would go much faster than one moving straight across; the squares merely exist to afford a rough means of guessing the range. Special measures are, therefore, employed.

Innumerable rules cover such matters as increasing and decreasing speed, turning, and so forth. General conventions exist, but in actual practice the real turning circles of ships

ensure hitting any particular part of a ship is, therefore, practically impossible, except at close range, and not very often then. Nice calculation is required, and also great coolness—too great effort after accuracy being usually as fatal as too little. Thus, by automatic means, that great factor of modern warfare, "moral effect," is provided for, since experience shows that no player whose ship has been badly knocked about ever hurts the enemy very much. One strike per gun is allowed; with reduced gun-fire he feels his chances of hitting reduced, and tries harder to make the most of what he has got, and the slight excitement, coupled with the extra

* "Strikers" will be seen on the table and in the hands of players in the big picture of a war game.



"SCORER" FOR H.M.S. "KING EDWARD VII."

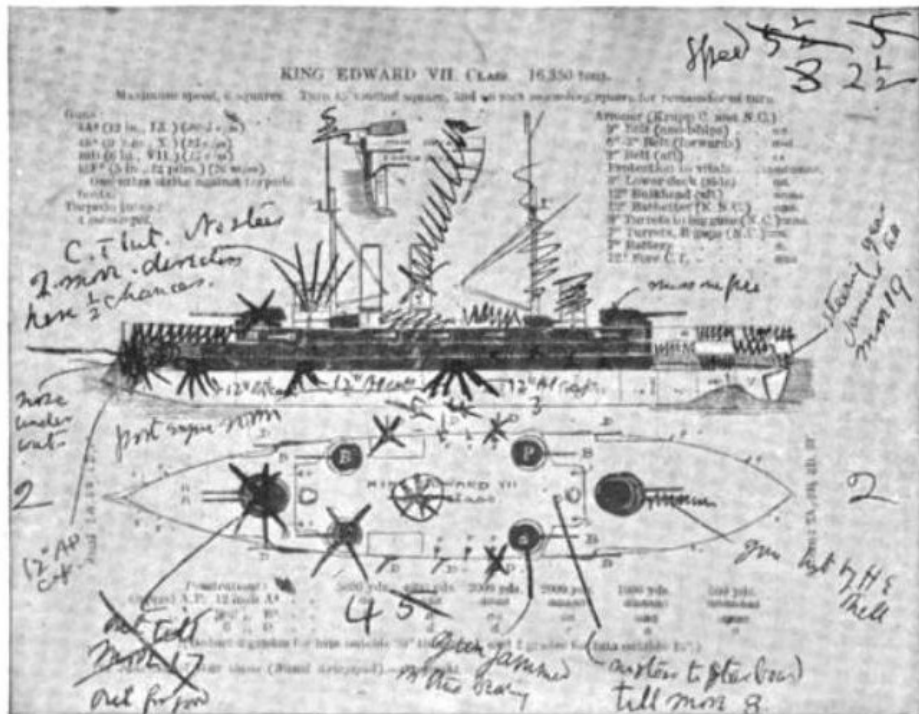
harm. When harm is done it is scored on the card of the ship hit on a scale corresponding to the actual damage that would be inflicted. In a very little while the player realizes that what will put one ship out of action will hardly hurt another. This in theory he has, of course, always known, but between knowing a thing and fully realizing it there is an enormous gap. He has been firing, perhaps, at the German *Kaiser Friedrich* and

effort that he makes, invariably disconcerts his aim.

To some extent the excitement of a battle always does this. When the game was first exhibited at the Royal United Service Institution, a certain admiral urged as a weak point in the shooting system that he could hit the enemy every time. He took a target and did it. Yet in the battle that ensued he never scored a single hit -- the slight extra tension upset his aim completely. And it is astonishing how many misses are made by many players from this cause.

Hitting the enemy is, however, but half the battle. If the ship fired at is armoured the impact may be on a cuirass that the gun represented cannot get through, or an armour-piercing shot may hit a part where no armour exists, and so do next to no

blown her to pieces almost with big shell. He shifts his fire to the *Wittelsbach*, hits her as often, and she comes on unhurt. These two ships have the same armament and the same weight of armour -- it is merely differently disposed. That difference of disposition tells in naval war game as heavily as it would in actual war.



THE SAME "SCORER" AFTER A BATTLE IN WHICH THE SHIP WAS KNOCKED ABOUT. THE DAMAGES HAVE BEEN SCORED ACCORDING TO HITS RECEIVED ON "TARGETS."

In this little piece of realism lies the fascination of the game. That it has extraordinary fascinations for some naval officers is beyond dispute. The Grand Duke Alexander of Russia, for instance, had all the furniture turned out of the big drawing-room at the Xenia Palace, St. Petersburg, in order to have set up a table large enough to allow huge fleets to be manœuvred, and he invited the inventor over to stay with him at St. Petersburg for a month in order to play against him. In a Russian lunatic asylum there is at this day a captain who actually went mad on the game and spends his existence in perpetual imaginary battles. In the British Navy there are dozens of young officers who think nothing of playing a game from half-past eight on to four in the morning, taking their chances of being able to find a shore-boat to take them back to their ships at that hour in the depth of winter. I have seen battles often in which the opposing sides would not speak to each other; indeed, when a regular "war" is being worked out this is the usual situation. It is being "real war in miniature" that produces this. The writer can vouch for the maddening effect in a battle of some apparently splendid scheme being ruined by a single "lucky shell" from the enemy. Too late one realizes that the best dispositions are not those that promise most, but those in which a lucky shot or two will not bring about failure.

Torpedoes, however, perhaps take first place as maddening irritants. In the game as now played in the British Navy, between each move screens are usually put up. The object of these is to prevent the enemy "answering" any change of formation more quickly than could be done in actual battle. Under cover of these screens torpedoes are fired—the firing method being to draw a pencil line following the bearing of the tube, firing not at the enemy, but at the spot on which he is *expected to be when the torpedo reaches him*. Torpedoes are slow things relatively. They can travel a thousand yards in a minute, but take three minutes to do two thousand yards, and six to go three thousand. Very nice calculation is, therefore, needed. At the expiration of the time—that is to say, anything from one to six moves after firing—if the torpedo line and any ship (friend or foe) coincide, the ship is torpedoed. Till then nothing has been said: the torpedo comes as a bolt from the blue.

The panic caused by the first torpedoes

fired under this system was immense. Both fleets put about and rushed away from each other, never getting within torpedo range again. In the centre, between the fleet, lay the victim, which the umpire had notified as torpedoed. Not till the battle was over was it made known that the torpedoed vessel had been hit by a torpedo fired by one of her consorts, across the path of which she had unwittingly wandered!

The acme of horror in this direction is perhaps provided by submarines. Slow moving, they have more or less to take up their positions before the battle begins. It is not permitted me to describe exactly how they are worked. I may say, however, that they are manœuvred on a separate board, and work blindly enough; for all that the player of a submarine sees of the battlefield is what he can find reflected in a tiny mirror. He has, in fine, to guess a great deal as to the course and distance of the enemy from the spot corresponding to that on which he is supposed to be, which reproduces the conditions under which a periscope is used fairly accurately. If a submarine can get within a square (one hundred yards) of a ship, that ship is allowed torpedoed. Nothing is allowed for the chance of the boat being seen by the ship, the assumption being that these chances are too small to be worth consideration; at any rate, till such time as it is too late for the ship to do anything.

This looks like an easy time for the submarine, but it is not so comfortable in reality, because destroyers and picket-boats may be with the enemy. Should a destroyer at any time pass within a hundred yards of the submarine, it is exit submarine!

In the British Navy the official home of the naval war game is at Greenwich Naval College, where captains play it during the "war course." In the United States the War College is its home. Its real British head-quarters are at Portsmouth, where a voluntary society plays it twice a week. Admiral Sir John Hopkins is the president of this association, and Mr. Fred. T. Jane, the inventor, its secretary. Both naval and military officers are eligible for membership, and, as far as possible, junior officers only. At the "war course" tactics are the principal study, but at Portsmouth tactics play a minor part. "Tactics cannot be taught by naval war game, save in a very general way," is the dictum of the inventor. "The Portsmouth Naval War-Game Society exists for quite different objects. It aims chiefly at teaching the guns and armour of possible enemies:

and for the rest tries to train officers to think out war problems, to train them to think things quickly, and to exhibit resource, to learn the value of all the vital side issues of war, such as international law or the keeping up of communications, and so forth. There is no such thing as the abstract right or wrong move in war; to do a more or less wrong thing at once may often be better than doing a better thing a little later. 'Act' is the motto that the society strives to inculcate."

It is, it will be seen, far removed from a "theory hot-bed." In pursuance of the plan the society's members are incessantly at war with each other. Advantage is taken of the rivalry that exists between ships in the Navy—and one ship's officers are usually pitted against those of another ship. At other times it is the Navy against the Army; and before now personal enemies have been pitted against each other.

"In cards and games you play for sport, but in war game you must 'play to win,' is the principle inculcated.

To this end anything whatever may be claimed, subject, however, to the provision that, should the umpire consider any claim impossible or absurd, the maker of it gets a breakdown to his best ship as a reward.

The record in claims is held by a young lieutenant who acted as Admiral Alexieff in a Russo-Japanese War. His claim ran as follows:—

"Orders issued that no offal is to be thrown overboard from Russian ships.

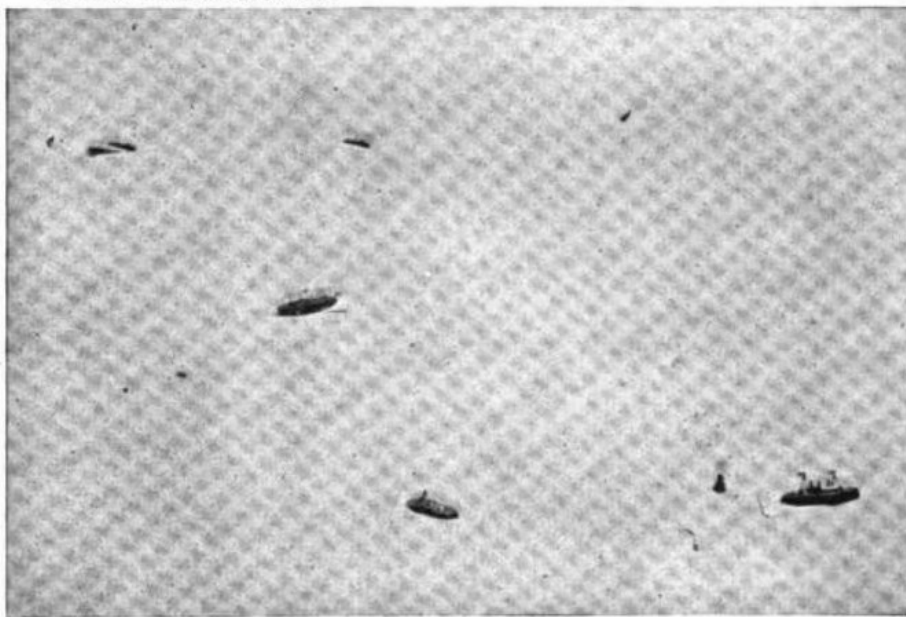
"A special field of small observation mines is to be laid at — (here a place geographically suitable near Port Arthur is mentioned). At this spot offal is to be freely thrown into the water to attract porpoises and sharks. When a good number have collected the mines are to be exploded and the stunned fish collected.

"Each is then to have strapped to it a leather band, holding a short pole in position (as per small model accompanying), after which it is to be liberated.

"I claim that these fish will, as usual, follow any vessels in the neighbourhood of Port Arthur dropping offal—that is to say, Japanese ships only—and that they will be taken for submarine boats when the pole like a periscope is sighted.

"The Japanese will soon detect the imposition, and then grow so used to the sight that after a time a real submarine will be able to approach without attracting any suspicion."

Attacking destroyers (Japanese).



Russian merchantman.

Russian battleship *Peresviet*.

A TORPEDO-BOAT ATTACK IN A RUSSO-JAPANESE WAR GAME—PLAYED OCTOBER-DECEMBER LAST. AS USUAL IN TORPEDO OPERATIONS, THIS WAS PLAYED ON A BOARD WITHOUT SQUARES, IN ORDER TO RENDER IT MORE DIFFICULT TO JUDGE DISTANCES.

From a Photo. by West.

Truly an astounding claim! It was not allowed by the umpire, but the fertile brain whence it originated is never likely to let its owner come to grief for want of an expedient.

As a rule possible actual wars are not often played: more usually imaginary countries are established in some part of Europe and given the ships which it is most desired to study. Admiralty charts are used, and an immense amount of study of harbours is thus put in as pastime, while these little wars give prominence to such minor operations as attacks on coastguard stations and so forth, which could not well enter into a larger war. Usually, too, there is some special theme—international law, perhaps, one time, gleaning and sifting intelligence another time, and so forth.

What was, perhaps, the funniest war ever

carried out had "Intelligence Sifting" as its theme. The combatants were allowed to procure information of each other's plans by any means they chose—any trick being regarded as legitimate. The gamut of the possible was run in no time. Both sides enrolled their friends as spies, and a silver-haired old lady, who liked to hear officers talk of their professions, was most deadly to one player. Two others, wishing to ensure private discussion, hired a motor-car. They had only gone some little way into the country when a policeman sprang from the hedge and stopped them. After the usual protests the policeman admitted an element of doubt in the case; if they would drive him to the police-station he would have his stop-watch tested in their presence. They took him on board and, as motorists have done before and since, marooned him far away after an hour's drive. By then, plans being decided, they went home by devious routes, thinking no more of the marooned policeman. Not till some days afterwards did it dawn on them that the policeman was a bogus one—an enemy who had availed himself of this means of learning their secret plans!

They were not, however, without resource. The day following the discovery they called on the ship which the chief "admiral" of the other side served in. Keeping out of sight, they waited till he went to his cabin; then, slipping in, gagged and bound him, after which they proceeded to rifle his cabin. Plans were soon found, but false information had been disseminated once or twice, and they were wary. They continued the search, being at last rewarded by finding the whole plain of campaign concealed inside a telescope.

After this they departed happy, and made their dispositions accordingly, handing these in to the umpire long before the gagged one—for they left him gagged and bound—was able to release himself.

Total failure was theirs: their wily enemy had in some way anticipated their raid, and the plan concealed in the telescope had been carefully prepared for their undoing!

It must not be supposed, however, that a war game is often so frivolous as this one, for in the ordinary way any such "spying" is strictly forbidden. Yet few games, perhaps, have been more useful than this one, for certainly half the players must have had impressed upon them in the most direct and

unexpectedly forcible of ways the urgent necessity of taking no information for granted and also of sifting it all most carefully, which was the object sought. And if in the hereafter any one of them is the repository of important Service secrets he will have to be a very wily spy who secures them from him. There cannot be much wrong while young officers can be found ready to sacrifice such little leisure as they get in studying war problems for amusement.

It is only in the British Navy that—so far as I can ascertain—this is done. In other navies officially supervised games are plentiful enough, but with them, of course, there is not the same interest. Here and there isolated foreign ships have the game on board and use it for purposes akin to those for which the inventor designed it. Two such ships are the Russian *Bayan* and *Novik*—the only two ships which have, so far, distinguished themselves in the present war.

In connection with the former ship it is interesting to note that her captain was a regular attendant at the Grand Duke Alexander's games in St. Petersburg, and used there to be laughingly called the "War-Game Skobeleft." Skobeleft, it will be remembered, was that Russian general who, in the Turco-Russian War, led a hundred desperate forlorn hopes untouched, though all around him were killed or wounded. Any ship played by Captain Wiren of the *Bayan* used to have similar extraordinary luck; as one Russian officer, who must have Irish blood in him, put it: "The enemy's hits on him were all misses." Strangely enough, the same luck has followed him in the present war—the *Bayan* survived the torpedo attack of February 8th; in the battle of the 9th, though she charged the Japanese fleet, she was untouched; in the action of the 25th February, when Captain Wiren, with three Russian cruisers, tried to fight the entire Japanese squadron, two were badly mauled, but the *Bayan* was not hurt.

In concluding this brief sketch of naval war game from the popular standpoint a reference may be made to flying-machines, which some think will be the warships of the future. Rules of the aerial fights of the future are said to exist all ready cut and dried, together with an ingenious machine by which the aerial warship's moves can be made. There is, in fine, nothing in earth, sky, or sea, or under the sea, that has not been the subject of rules in this "War by Kindergarten."