

THE LIGHT CAVALRY OF THE SEAS

By D. Pratt Mannix

Lieutenant-Commander U. S. Navy

ILLUSTRATIONS BY L. A. SHAFER



HE torpedo flotilla of the Atlantic fleet as now organized consists of twenty-five destroyers divided into five divisions of five boats each. Their duties are almost precisely the same as those performed by the cavalry of a land army. Just as the mounted men are the "eyes of the army" so are the destroyers the "eyes of the fleet."

The general characteristics of these vessels are as follows: length, 300 feet; beam, 26 feet; displacement, 850 tons. They draw about ten feet of water, and each boat carries four officers and a hundred men. Their armament consists of three double torpedo tubes and five semi-automatic three-inch guns. Armor protection they have none, depending on their high speed (about thirty knots or thirty-four statute miles an hour) and the fact that most of their work is done at night.

As the name implies, torpedo-boat destroyers were originally built to combat the smaller torpedo-boat, which had become such a serious menace to the battle-ships and large cruisers that search-lights and rapid-fire guns could not be depended upon for protection. Gradually, however, the duties of the destroyer were extended until they included all that was formerly done by the torpedo-boat and much besides. The mere fact that a modern destroyer is three or four times as large as one of the earlier boats renders it so much more seaworthy and capable of carrying so much more fuel that the radius of action of torpedo-craft has been enormously increased, and they have become more and more dangerous to an enemy's fleet.

The duties of a modern flotilla may be tabulated in this way:

(1) Scouting. This comprises locating and reporting the position of the enemy and keeping in touch with him as long as may be necessary.

(2) Protection of one's own fleet from night attacks of the enemy's destroyers. This includes not only locating and reporting the position of the hostile torpedo-craft, but, if necessary, attacking them with your guns and sinking or driving them away before they can force home an attack against your battle-ships.

(3) Attacking the battle-ships of the enemy with your torpedoes. This is, of course, the paramount duty of every vessel in the flotilla.

(4) In addition to the above "regular" duties, destroyers are frequently used in what might be called "gunboat work": patrolling the enemy's coast; running up his rivers where the big ships cannot go; overtaking and capturing his merchant-vessels and firing on troops and field-batteries ashore. In the recent Turco-Italian War, although the Turkish navy remained at anchor most of the time, the Italian destroyers were constantly engaged, blockading, landing troops, and even attacking fortified towns.

In scouting, many different systems may be used. Most of these are confidential and cannot be divulged, but a general idea of the problem that confronts the flotilla may readily be given. Suppose a hostile fleet is making preparations to leave Europe, with the evident intention of attacking some point on our coast-line, or, as would be more probable, of seizing some island in the West Indies, establishing a base there, and directing operations against either the Panama Canal or the mainland. As long as that fleet is in or near Europe we can follow its movements from day to day. That is what our diplomatic agents and secret-service men are for, and they would cable, in cipher of course, detailed reports, not only of the fleet's location but of the number and types of vessels composing it, the amount of ammunition and provisions on board, the state of discipline of the crews, and

everything that could possibly be of assistance to us in preparing to defend ourselves.

Now, suppose the hostile fleet weigh their anchors, and, steaming past the rock of Gibraltar, head out to sea. In a few hours they are out of sight; they can steer any course they wish and travel at any speed up to their maximum. It will not be many days before the people of our country will be asking themselves: "Where are they? When will they appear off our coasts, and what will be their first point of attack?"

We have certain facts to help us. No modern ship can keep the seas for months at a time as did the fleets of a hundred years ago. They must coal. We know the coal capacity and also, roughly, the coal-consumption at various speeds of all foreign war-ships just as they know ours. Hence we are certain that after a comparatively short time at sea the enemy must put in somewhere to refill his bunkers. If, however, they take their colliers with them, as a large fleet would undoubtedly do, even this becomes uncertain, as it is not impossible, in smooth weather, to coal at sea. Should such a force evade our battle-ships and effect a landing either in the West Indies or on the mainland they might do untold damage before they were overcome and their ships destroyed. Most of the school histories carefully slur over the fact that a few thousand British soldiers and sailors, under General Ross and Admiral Cockburn, marched to Washington, burned the national capitol, and escaped to their ships with trifling losses.

It is the destroyers' duty to locate the enemy as soon as possible and notify our fleet of dreadnaughts so that they can attack before he succeeds in landing his forces. His position, within certain wide limits of latitude and longitude, can generally be established by reports from merchant-ships who have seen him and ports where he has stopped for coal or repairs. This gives us a "scouting area," which the flotilla must carefully patrol by day and night.

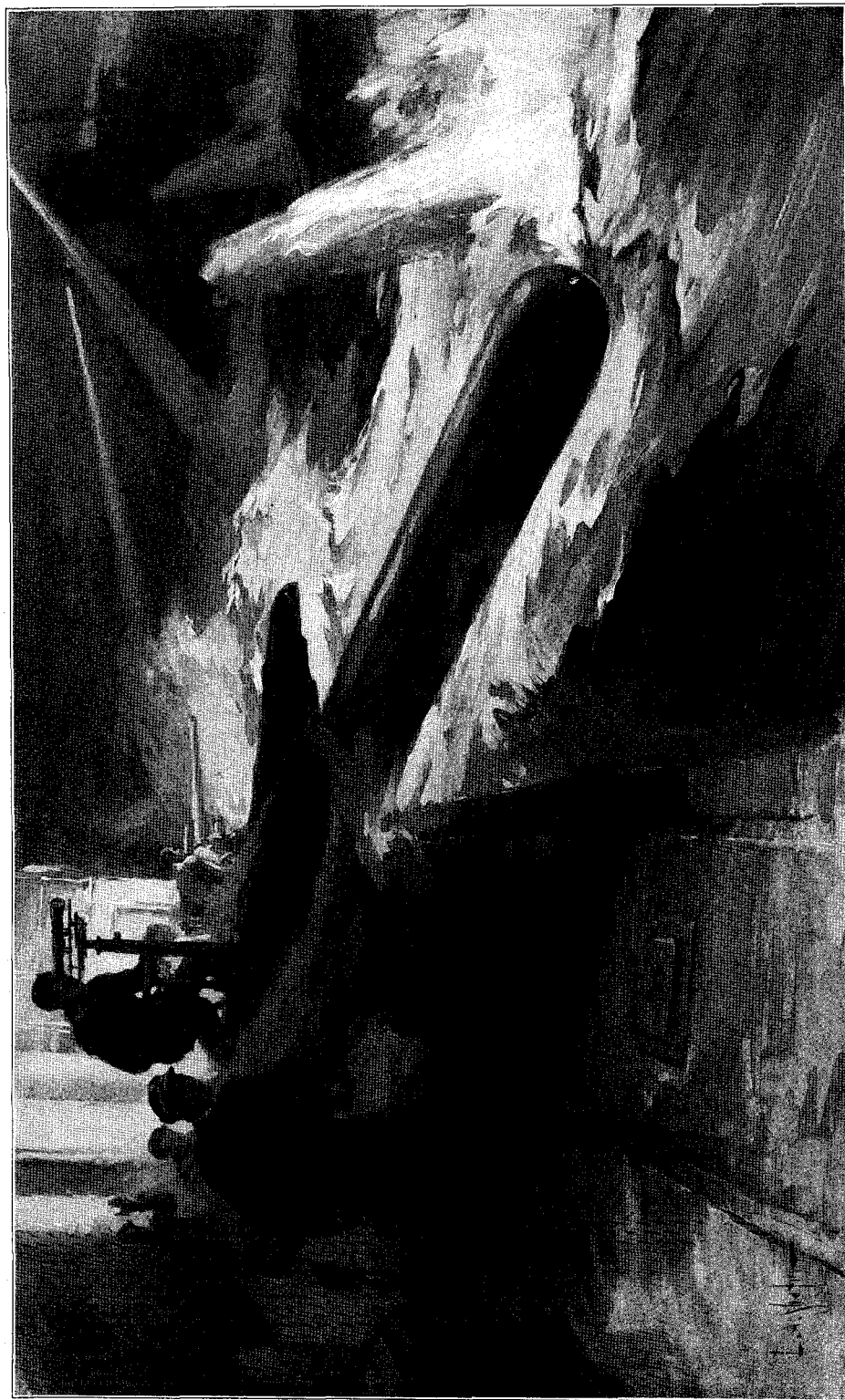
The simplest type of such a patrol is to form the boats in a line with wide intervals between them, just as a skirmish-line is formed ashore. These intervals should be as large as possible, but not so great

that an enemy's vessel could slip through without being seen by at least one of the destroyers. On a clear day they might be twenty miles apart; a division of five could then cover a hundred miles of the ocean.

The boats being in position, at a certain hour previously designated they start steaming toward the enemy, all making exactly the same speed in order to keep their proper station or "dress" in the scouting-line. Lookouts on the bridges carefully watch for any sign of smoke on the horizon, which is usually the first indication of the presence of a stranger. Anything seen must immediately be investigated, and, if necessary, reported by wireless to the battle-ships either directly or, if they be far distant, through a chain of vessels which relay the message along until it reaches the admiral. Should the stranger be harmless he is allowed to proceed, but if he prove to be one of the enemy's scouts, his location is at once sent broadcast by the wireless of the destroyer discovering him, and every effort is made to find the hostile battle-ships, which are probably not far from their scout. When contact is made with the big ships a general wireless call is sent out for all destroyers to assemble in that vicinity. Here they wait, taking advantage of their superior speed to keep just outside the range of the big guns, until night falls, when they may either attack or continue "tracking" the enemy, being careful not to lose touch for a moment and sending repeated reports to their admiral of what he is doing.

Of course, the hostile fleet will make every effort to keep these reports from getting through by "interfering" with their own wireless, and the best method of avoiding this interference is being constantly studied by all navies. One of the amazing examples of inefficiency shown by the Russian fleet which was destroyed by Togo in the Sea of Japan, was their permitting the Japanese scouts who were following them and reporting their movements to "talk" at will without making an effort to mix up the messages by using their own wireless.

If the enemy has not been discovered until he is very near our coast it will be necessary to attack as soon as darkness



Drawn by L. A. Stauffer.

The destroyers dash at full speed upon the head and flanks of his column, getting as close as possible before discharging their torpedoes. — Page 576.

makes success possible. The destroyers assemble by divisions and with all lights extinguished dash at full speed upon the head and flanks of his column, getting as close as possible before discharging their torpedoes, and then swinging out into the darkness again to make another attempt, provided they are not sunk in the first.

There is only one possible protection for a fleet against such an attack, and that is to oppose destroyers with destroyers. This is done by forming a "screen" of torpedo-craft around the large ships. This screen, which consists simply of a big circle completely surrounding the main fleet of battle-ships, keeps careful watch, and the moment any of the opposing destroyers attempt to break through and get at the battle-ships the vessels of the screen illuminate the attacking boats with their search-lights and open fire on them with their guns, making every effort to keep their line from being broken. Service in the screen in time of war is the most dangerous possible, as the gunners on the big ships have a decided inclination to shoot at anything that looks like a destroyer, particularly during the excitement and confusion of a night attack when, if they wait too long to determine whether she be friend or foe, the answer may be a torpedo under the armor-belt. During the Russo-Japanese War all our destroyers on the Asiatic station were painted white instead of the usual dark gray, to prevent any possible mistakes being made either by Russians or Japanese.

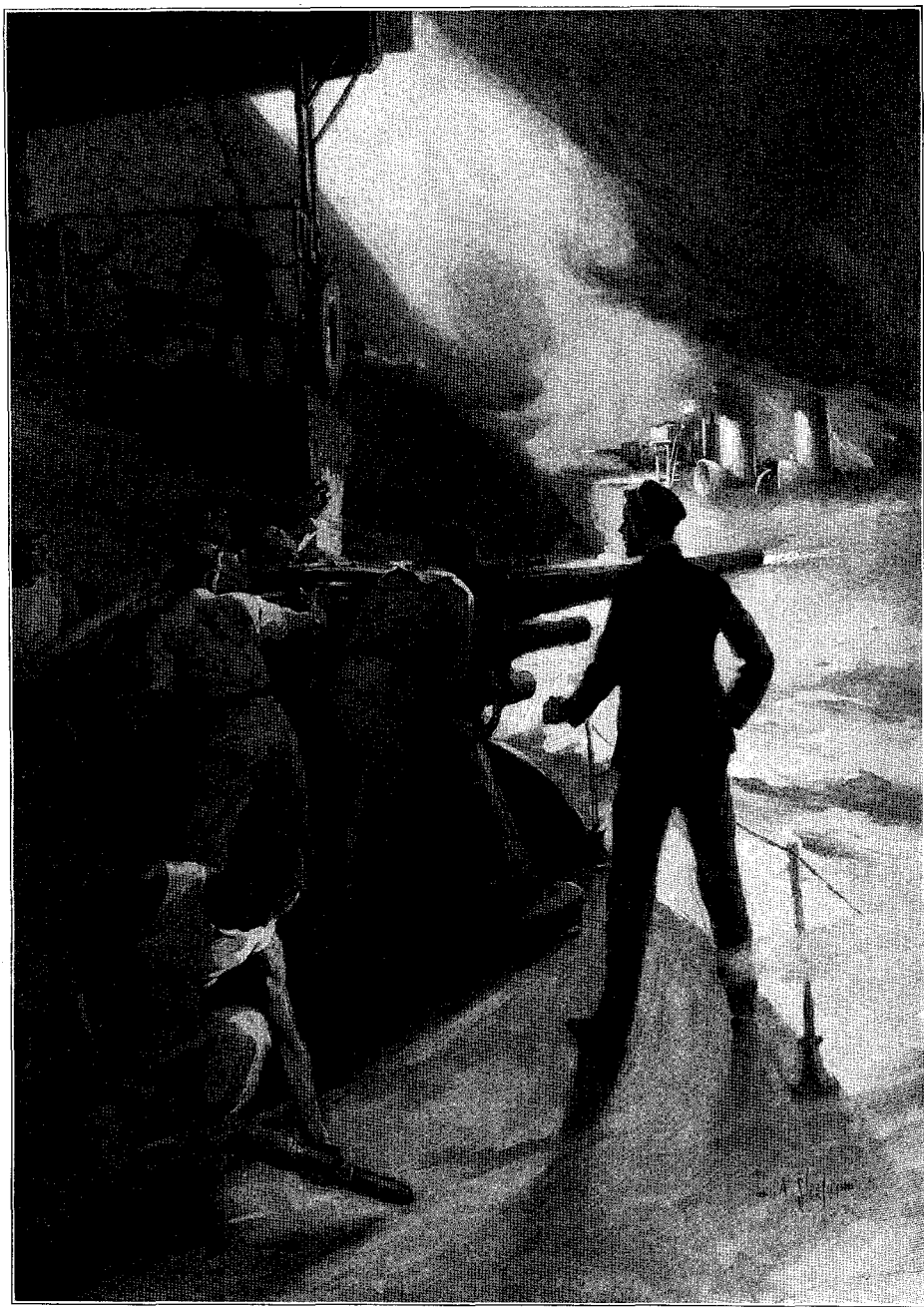
All these exercises are held in time of peace, so that our flotilla may be efficient in war, even to the firing of actual torpedoes at battle-ships during night attacks. The usual explosive, or war head, is removed and an "exercise" or collapsible head substituted. If a battle-ship be hit the head of the torpedo is mashed in, but that is all the damage done, and the vessel attacked is never in any real danger. The illustration [p. 578] shows the head of a torpedo of the destroyer *Jarvis* after one of the night attacks made off the Cuban coast last winter. In this attack the division of five boats to which the *Jarvis* belonged ran at full speed with all lights extinguished across the bows of an advancing column of battle-ships, discharging their torpedoes in succession as they passed the

line. The *Jarvis's* shot struck the second ship in the column on the starboard side forward, and would have seriously damaged her had there been an explosive charge in the torpedo.

During these manœuvres the destroyers keep very close together and run at high speed; hence it requires great coolness and quick action on the part of their officers to avoid collisions as the nights are frequently so dark that the boat ahead is invisible when only a few yards away. The boats themselves are of such light construction that any collision at the high speeds they habitually use is always most serious and generally involves loss of life. Only a few months ago a German destroyer was cut in two during manœuvres in the North Sea, and nearly all her officers and men were drowned. The only light carried by the boats in these exercises is one directly over the stern. As they manœuvred habitually in a column or "single file," the screened stern light of each boat serves as a guide for the boat behind her, enabling the leader to make any changes of direction that may be necessary: As the lights do not show from ahead, they are entirely invisible to the enemy.

Sometimes the flotilla is divided, half the boats serving on one side and half on the other. This greatly increases the danger of the manœuvres, for the simple reason that when two destroyers without lights are each making twenty-five knots and are heading toward each other they are actually approaching at the rate of fifty knots an hour, or express-train speed. Many of the captains make it a rule to have life-preservers served out to their crews before going out for any night work.

Various clever ruses have been used by the boats in their operations against the big ships. On one occasion a division of destroyers got within a few hundred yards of several battle-ships without discovery, by the following stratagem. Instead of turning out all their lights the leading boats hoisted two white lanterns in a vertical line on her foremast. This is the signal that all tugs carry while engaged in towing other vessels. The boats behind her turned on their regular red and green side-lights and were careful to keep in exactly the same relative positions. As



Drawn by L. A. Shafer.

The vessels of the screen illuminate the attacking boats with their search-lights and open fire on them

the night was very dark and their outlines could not be seen by an observer two hundred yards away, they looked exactly like a peaceful tug engaged in towing a line of barges, and in this guise they ran in very close to the big ships, whose crews were straining their eyes looking for vessels without lights.

The introduction of oil fuel was a great improvement, as it makes sudden changes



Head of a torpedo of the destroyer *Jarvis* that struck a ship during manoeuvres.

in speed possible. You may be steaming along at fifteen knots and if you want to make twenty-five all you have to do is send the order to the engine-room. With a coal-burner considerable time was required, as fires had to be built up and other preparations made. Oil fuel also renders unnecessary the dirty and unpleasant work of coaling ship. Now we simply run alongside the oil vessel, connect up the hose, start the pumps, and all hands go to dinner except a man to see that the tanks don't overflow.

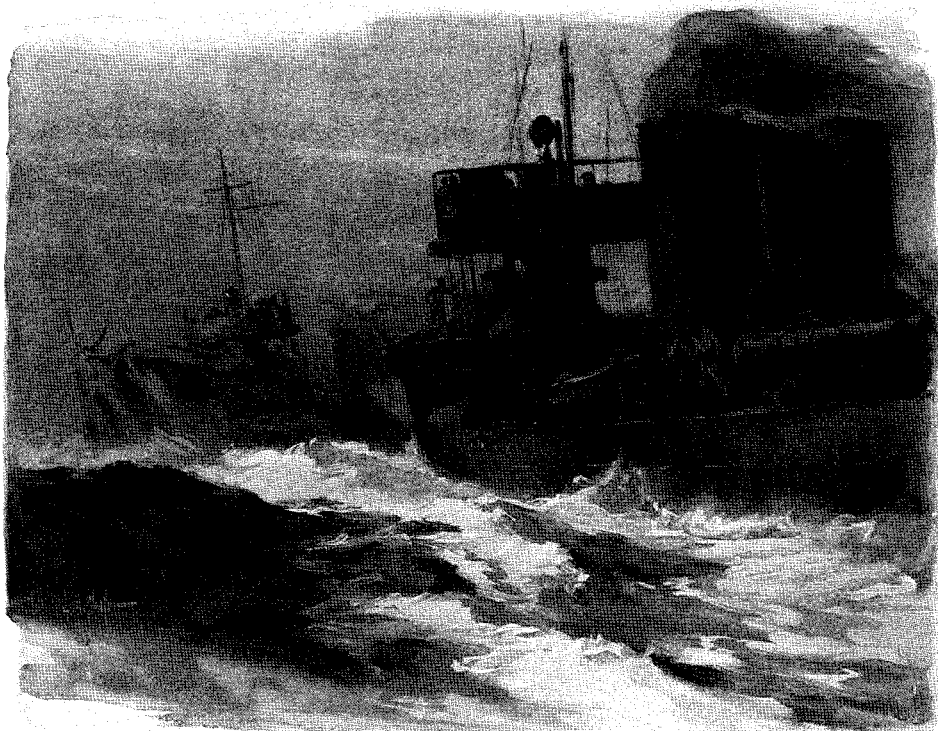
The popular idea of a modern naval combat is two fleets miles apart firing at each other with their big guns. This by no means applies to the torpedo-craft. While their paramount duty is to attack

the big ships of the enemy they not infrequently get mixed up in very lively scrimmages with each other. The Russo-Japanese War abounds in such incidents. In at least two cases boarding and hand-to-hand fighting were resorted to. In one of these, the famous case of the *Ryshitelni*, the Russian destroyer of that name ran into Chefoo Harbor, where she was followed by a Japanese boat whose officers and men boarded her, and, after a rough-and-tumble fight on her decks, during the progress of which the captains of the two boats rolled overboard clasped in each other's arms and continued fighting in the water, the Russian was seized and towed out of the harbor, in absolute defiance of the fact that China was a neutral country.

In the second case a Russian boat was boarded in the open sea off Port Arthur and her crew either killed or driven below. In still another instance, during operations at night, a Russian boat joined a division of Japanese destroyers, thinking they were friends; all night long they cruised together, but at daylight recognition was mutual, and the Russian was promptly sunk by the combined fire of her foes.

The officers of the U. S. S. *Wisconsin*, lying at anchor off Shanghai one summer's day in 1904, witnessed a spectacle that none of them will ever forget. A great armored cruiser came dashing in at full speed from seaward. Four of her five stacks were standing; where the fifth had been was a gaping hole in her decks from which smoke and flames rose mast-head high, a veritable floating volcano. Close at her heels, like hounds after a stag, sped two hostile destroyers. It was the *Askold* escaping from the disaster of August 10.

Earlier wars provide many examples of dashing torpedo work. In the conflict between China and Japan in 1894-5 the Japanese boats distinguished themselves both at Port Arthur and at Wei-hai-wei. In the capture of the famous fortress, later wrested from the Russians, the destroyers ran close inshore, where they could not be reached by the fire from the big coast cannon, and enfiladed the Chinese trenches with their machine guns, greatly assisting the soldiers, who were assaulting the fortress from the rear. After



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the disastrous battle of the Yalu the Chinese fleet took refuge in Wei-hai-wei harbor, anchoring close inshore under the guns of the forts. Here they were attacked early in February by seven torpedo-boats. One of the battle-ships was so badly damaged that she was hauled into shallow water and abandoned. The boats made the attack under a heavy rifle fire and were struck repeatedly, but little damage was done. Two of them were hit by small-calibre shell, exploding the boiler of one and so badly wrecking her that she had to be abandoned. A second shell burst in the fire-room of another of the boats with very little damage. In running out of the harbor after the attack a third boat ran aground while rounding the end of a long boom that had been laid across the entrance to prevent their getting inside. It is related of the officers and crew of this destroyer that, after making every effort to get afloat again and finding

it impossible, as they had struck the bottom while running at full speed, all hands turned in and had a good sleep notwithstanding the fact that they were under the very muzzles of the Chinese guns.

In a second attack five boats took part: three of these managed to squeeze around the end of the boom; the other two headed directly for the obstruction, and went "full speed ahead." Their momentum was so great that they jumped the boom like horses going over a hurdle and landed safely on the other side, with the enemy's ships directly in front of them. The Chinese threw their search-lights on the attacking boats and opened a tremendous fire with their guns, but they were so excited that all their shots went high and not one of the destroyers was hit. The Japanese promptly let drive with their torpedoes and succeeded in sinking three large ships.

These operations were conducted in

North China in the dead of winter. The hardships suffered by officers and men were simply incredible. On many mornings they were obliged to chop their boats out of the ice before they could get under way, and on at least one occasion a destroyer failed to fire her torpedoes, because the tubes were so clogged with ice and snow that they could not be used.

In the Chilian Revolution of 1891 a rebel battle-ship was attacked by two government torpedo-boats while at anchor in Caldera Bay. The Chilians knew nothing at all about the mechanism of torpedoes, but managed to get hold of a French ex-man-of-war's man who, very obligingly, adjusted their torpedoes and put them in working order. The two boats then entered the harbor, keeping a bright lookout for the enemy. Immediately upon sighting the hostile battle-ship the first destroyer ran at her and fired three torpedoes, all of which missed the mark. The large ship opened a tremendous fire with all her guns. The second boat meanwhile had been entirely unobserved by the enemy; she came up on the other side to within a hundred and fifty yards and fired a torpedo which missed; she then fired a second which hit the large vessel amidships, sinking her and drowning eleven officers and one hundred and seventy-one men. Not a man was hurt on board the destroyers and the boats themselves were very little damaged.

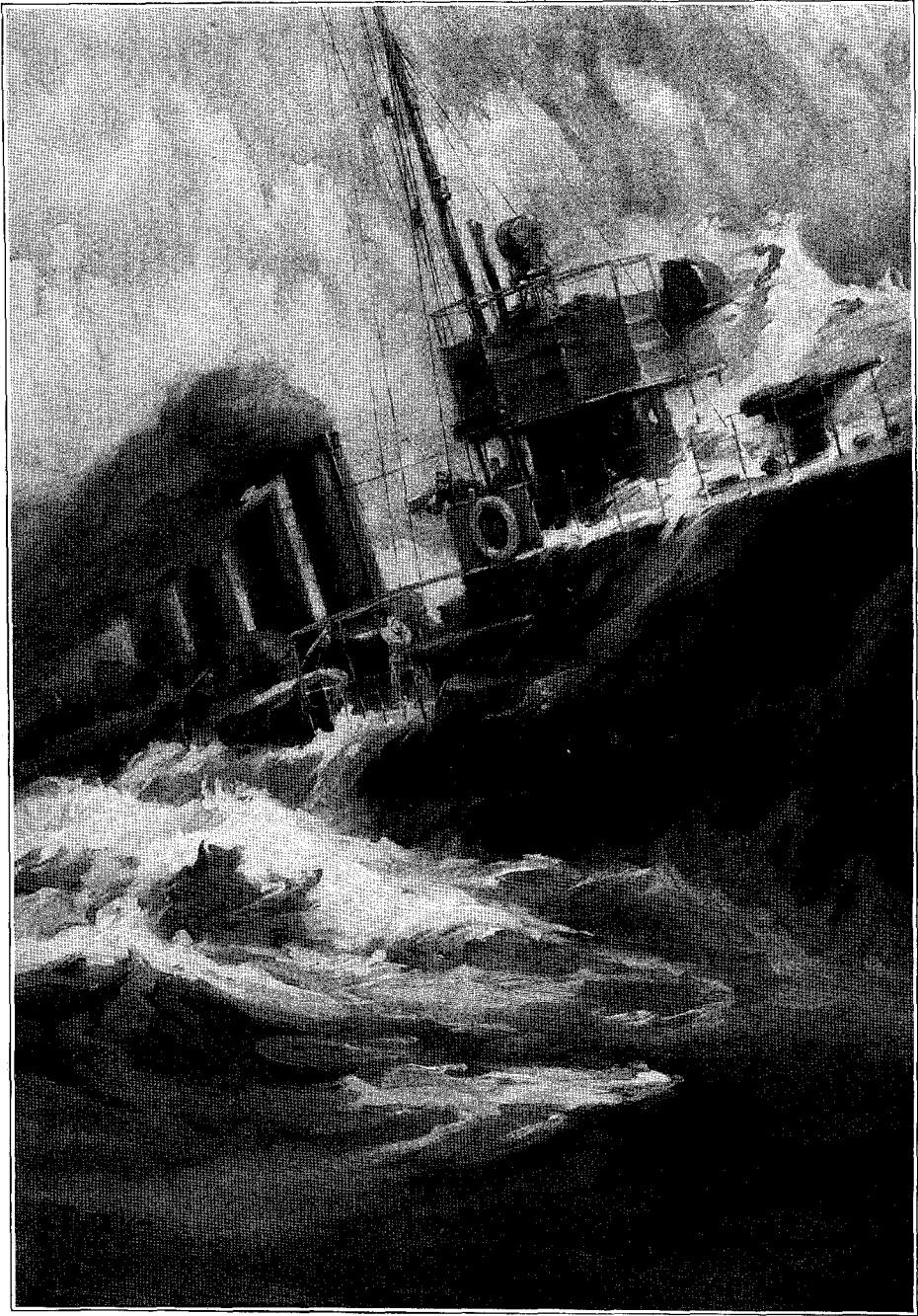
In a second revolution, that of Brazil in 1894, four government boats decided to attack a rebel battle-ship at anchor in Saint Catherine Bay. They had intended attacking simultaneously but got separated while entering the bay, and only one of them discovered the enemy. She suddenly sighted the battle-ship off her starboard bow and was promptly greeted by a heavy gun-fire. The captain went full-speed toward the big ship and gave the order to fire the bow torpedo, but through some mistake it had already been fired and the shot was lost. Very angry at this, he swung his ship around the battle-ship's stern and gave orders to fire the second torpedo, but nothing happened. The second officer then ran aft and fired the torpedo himself. A tremendous explosion followed, and shortly afterward the battle-ship sank in the shallow waters

of the bay. The destroyer was hit thirty-eight times by one-inch shell, but only one man was hurt, and the boat itself only slightly damaged.

Without question service on a destroyer involves more hardships than any other kind of naval work. Many officers, including the writer, have gone to sea for years in the larger vessels without ever feeling even slightly uncomfortable, yet, since joining the flotilla they have on frequent occasions been violently and unblushingly seasick. It is a common saying with us that a man doesn't know what "seagoing" really is until he has tried it on a torpedo-boat. It makes one appreciate the tremendous hardships that Columbus, Cabot, and the other early navigators must have endured when they crossed the Atlantic in their cockle-shells.

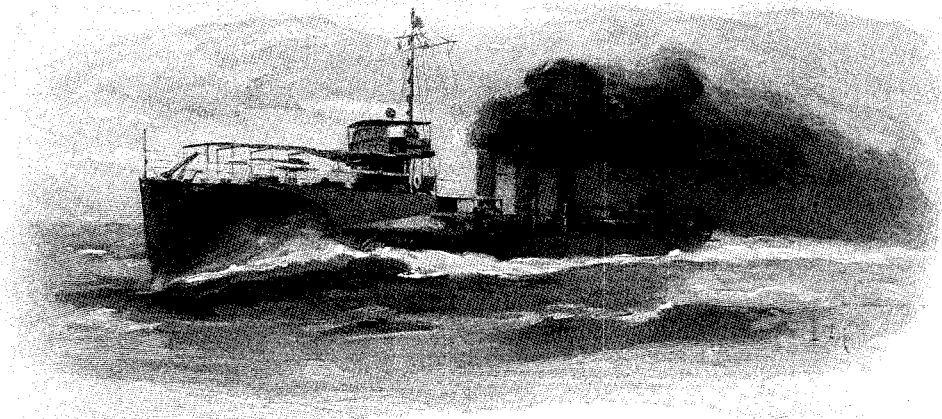
Last winter the entire Atlantic fleet cruised from Guantanamo, Cuba, to the Isthmus of Panama in order to give officers and men an opportunity of seeing the canal before the water was let in. The usual cruising speed of the destroyers, when by themselves, is twenty knots, but, as it was advisable for all units of the fleet to arrive at the same hour, we were obliged to steam at the same speed as the battle-ships, or twelve knots, the result being that all the way across the Gulf of Mexico we rolled between thirty and forty degrees on a side and there was not a moment's cessation of this rolling. We anchored in Colon Harbor at six o'clock one evening, and all that night, even with our anchors down, the rolling continued, as there was a heavy swell coming in from the Gulf, and the breakwater, which is to protect the harbor, was not completed. Early the next morning we ran up the old French canal, went alongside the dock, and all hands from captain to cabin boy turned in and had their first sleep in four days.

As an example of destroyer work I would like to tell you of our experience on the *Jarvis* last spring. The *Jarvis* had to come north from Cuba before the other boats, in order to hold certain steaming trials. During the early evening we had been manœuvring with the fleet, but about eleven o'clock orders were received to "proceed on duty assigned." Course was set for Cape Maysi on the eastern end



Drawn by L. A. Shafer.

All day we labored through it, and late in the afternoon sighted Watling's Island.—Page 582.



A destroyer at sea.

of Cuba and orders given to make twenty knots' speed. As everything was running smoothly, I went below to get a few hours' sleep; about two o'clock in the morning I awoke to find the ship was rolling and pitching very heavily. She would go flying up in the air, pause for an instant, and then descend with dizzy suddenness, landing on top of a wave with a crash that made her quiver from stem to stern. It wasn't unlike coming down in an express elevator and being stopped too quickly. Realizing that we were no longer in the lee of Cuba, I jumped out of my bunk, but hardly had my feet touched the deck when I was thrown the entire length of the room flat on the floor, and the next instant the heavy swivel desk-chair came down on top of me cutting a gash eight inches long in one shin; struggling to my feet I was immediately taken with violent seasickness but managed to get my clothes on and climbed up on the bridge. Here I found that after passing Maysi our change of course to the north had brought wind and sea directly ahead, and the ship was receiving tremendous blows from the high waves as she forced her way through them. Speed was reduced to fifteen knots, but just as the change was made an enormous green sea came over the bridge, drenching us to the skin and smashing the glass in the binnacle and the top of the chart-board.

All day we labored through it, and late

in the afternoon sighted Watling's Island (which, by the way, was the first land seen by Columbus in 1492) and, passing through the Crooked Island Passage, set course for Cape Hatteras. The weather kept getting worse all the time: seas constantly swept the forecabin; several of the hatch-covers were forced open and water came in to such an extent that the ship had to be headed off and volunteers sent to close and secure the hatches.

For three days neither sun nor stars had been visible; hence we were by no means certain of where we were, as no observations could be taken. Finally, our dead reckoning showed that we should be within fifty miles of the Diamond Shoals Light Vessel, which is just off Cape Hatteras. From the appearance of the water we could tell that it was rapidly getting shallower, and, as there are some very dangerous shoals off Hatteras, with only a few feet of water on them, we were very anxious to know our exact position.

There is only one way of ascertaining a ship's position in thick weather at sea, and that is by taking soundings. Orders were given to start the sounding-machine. This machine is a heavy steel reel on which is wound about five hundred fathoms of strong wire with a lead on the end. The men sent aft returned and reported that the sounding-machine had been washed overboard. Its steel legs, riveted to the deck, were still there, but

were broken off short by the force of the waves. The ship was then stopped and an effort made to find the depth of water by lowering a long line with a weight on the end. We kept drifting to leeward so fast that the line stood out straight from the ship's side and no sounding could be taken.

Meanwhile darkness was rapidly approaching and our position was becoming more and more dangerous. Just then the sun showed itself for about three seconds, and, snatching a sextant, I managed to take a very doubtful altitude, which placed us *fifty* miles beyond our dead-reckoning position. Hardly had this discovery been made when a sharp-eyed quartermaster pointed to a dim object, well on the port hand, and heading for it we discovered, to our extreme relief, that it was Diamond Shoals Light Vessel.

This fixed our position absolutely, and we headed up the coast for the entrance to Chesapeake Bay. Hardly had we

dropped the light vessel astern when a terrific downpour of rain commenced drenching us to the skin, and entirely obliterating all the shore lights and other aids to navigation. It was bitterly cold and I had to decide between wearing a sweater drenched with ice-water or wearing no sweater at all. I decided on the ice-water. All around us we could hear whistles and fog-bells getting louder and louder as we approached the entrance of the bay. Finally I decided that further progress would be foolhardy, and we let go the anchor, veered to sixty fathoms, and rolled out the night, bitterly cold and drenched to the skin. With the rising sun we discovered that we were directly in the entrance to Chesapeake Bay, and at six o'clock got under way and proceeded to the Norfolk Navy Yard. For four days we had not taken off our clothes or sat down to a meal.

There was no report ever made of this trip, for there was nothing to report. It was "all in the day's work."

MUNNERN

By Georgia Wood Pangborn

ILLUSTRATION BY FLORENCE E. STORER



HER name had been given her with distinctness and precision, on a wild midnight when there was sharp trouble in his mouth. Nothing to worry about.

Teeth have to come, you know. Any parent, however weakling, can summon sufficient philosophy to bear *that* for them. Only—they do stay awake so, and make everybody else do it with them. She was sleeping, but lightly, while somebody else "had him," and the summons, stern yet appealing, rung through the house for the first time.

"*Munnern!*"

And she had answered to her name thus coined out of his need like a hound whistled to heel.

Ancient history now! Words had followed thick and fast, tripping each other

up into strange, elfin tangles; big ones and little ones, some clear as diamonds, some with blurred rainbow edges—a wild, hurrying multitude. But "Munnern" stayed. That was her fault. She had clung to it foolishly, making no effort to transmute it into the correct "mother." Munnern she was still, and likely to remain even when the little voice that had named her should be heavy and deep with an amazing vocabulary.

Heavy and deep—*that* voice! A man's even step upon the floor instead of that light, clattering hurry, with the danger of a bump as its goal! Can the unborn summers hold such miracles as *that*? A man! Yet exactly this thing does happen to little boys—theoretically. She knew the scientific fact—like interstellar distances, or the age of mountains, not as a thing the mind could really grasp.