CHAPTER CCLXXI.

THE NAVY'S WORK IN 1918.

THE NAVY'S SHARE IN VICTORY—CHIEF EVENTS OF 1918—ADMIRALTY CHANGES—PATROL WORK—THE MEDITERRANEAN—GERMAN ATTACKS ON CONVOYS AND FISHING CRAFT—YARMOUTH BOMBARDED—THE CHANNEL BARRAGE—GERMAN RAIDS—THE NAVY'S REPLY—ZEEBRUGGE AND OSTEND, APRIL 23, 1918—FULL ACCOUNT OF THE OPERATION—OSTEND AFFAIR, MAY 9—NORTH SEA MINE BARRAGE—OUTPOST AFFAIRS—RAID ON TONDERN—COASTAL MOTOR BOATS—WONDERFUL WORK OF THE "MYSTERY SHIPS"—THE NAVY'S ACHIEVEMENT.

THE work of the British Navy during the fourth year of the Great War, ending on August 4, 1918, and in the weeks immediately following, was necessarily overshadowed by the dramatic and unprecedented events which marked the close of hostilities on November 11, 1918. This Chapter is a narrative of the occurrences in which the British seamen were engaged afloat in the twelve months which led up to that event.

It was recognized throughout the world as soon as hostilities were concluded how great a part in bringing about this end had been played by the British Navy, the bulwark which stood from the first between aggressive Germany and the cause of civilization. Some of the most enthusiastic tributes to the British Fleet's work came from the United States. "If America had not come into the war," said Admiral W. S. Sims on November 15, at the American Luncheon Club in London, "the Central Powers would not have won the war; the British Fleet would still have had command of the sea." On another occasion the Admiral, referring to the transport of American troops to Europe, said: "We did not do that. Great Britain did. She brought over two-thirds of them and escorted a half. We escort only one-third of the merchant vessels that come over." On the day that the armistice was signed, Admiral Sims addressed a letter to Sir Rosslyn Wemyss, First Sea Lord, in which he referred to the "fact, patent to all the world, that the defeat of Germany was in large part accomplished by the power of the British Navy." Similarly, on November 25, 1918, when Admiral Mayo, commanding the American Squadron in Europe, left England on board the Mauretania, he declared: "The American Navy is very proud to have been associated with the Allies in the latter part of the war. We appreciate that sea power has won the great victory, and it is impossible to pay too high a tribute to the great British Navy. It was the control of the seas which enabled this wonderful victory to be achieved."

Significant among the references of French statesmen and publicists was the message of Marshal Foch, contained in a telegram to Sir David Beatty, in reply to the latter's congratulations. "I am deeply moved," said the Marshal, "by the congratulations of the British Grand Fleet, and I send on behalf of the Allied Armies and myself our sincere thanks. I am glad to pay tribute to the brilliant exploits of the British Navy and to its valuable collaboration in the common cause, also to express to the Grand Fleet and its illustrious chief the gratitude of the armies." An indication of Italian thought was afforded by the following statement of Prince Colonna after visiting the Grand Fleet: "The sight of it (the Fleet) has given us pleasure and courage, because we know it is more than equal to any attempt the enemy might make to break out

of the iron circle in which the Grand Fleet kept them for four years."

The appreciations uttered by the leaders of the British people on the historic occasion of the termination of hostilities also deserve to be placed on record. Mr. Lloyd George,

ACTING-ADMIRAL SIR ROSSLYN E. WEMYSS, G.C.B.
First Sea Lord.

speaking at Wolverhampton on November 23, 1918, said:

As to our sailors, never has the record of the British Navy been so glorious; never have its men and its leaders shown greater skill, greater resource, greater daring, greater efficiency, or higher qualities of seamanship. Never has the supremacy of our Navy been challenged so resolutely and by such insidious means. Never has its triumph been so complete. The world, and especially the freedom of the world, owes much to the Navy of Britain. The Navy of Britain saved freedom of conscience in the days of Elizabeth, when it was challenged by a great and mighty Empire. It saved it time and again when freedom was in peril in the days of Napoleon. To-day the freedom of the world owes everything to the daring, to the tenacity, and to the valour of the men of the British Navy.

Mr. Churchill, at Dundee on November 26, declared that no arguments, however specious, no appeals, however seductive, must lead us to abandon that naval supremacy on which the life of our country depends. The British Navy had preserved for the third time in history the freedom of the world against a military tyrant. "Without it, not only were we lost, all was lost, and the whole world cast back for centuries." Mr. Churchill also affirmed that a League of Nations was no substitute for the supremacy of the British Fleet.

An interesting disclosure was made by the First Lord, Sir Eric Geddes, at the Lord Mayor's Banquet on November 9, concerning an incident which happened not a fortnight previously. The whole stage was set for a great sea battle, said the First Lord, but something went wrong. The arm which was going to try a last desperate gambling stroke was paralysed. The German Navy was ordered out and the men would not go.

Chapter CCXII contained an account of British naval operations from November, 1916, to November, 1917, and in concluding the narrative reference was made to the warning of Sir Eric Geddes on November 1, 1917, that there were great and ever greater calls upon the shipping of the world, and that to assist the Allies, all of whom required sea-borne help, the nation must be prepared strictly and

ADMIRAL MAYO.
Commanded the American Squadron in Europe.

rigorously to curtail its needs, to develop home resources, and to conserve its present and potential maritime strength. The need for this warning was made apparent in the winter months of 1917–1918, when there were fresh evidences of German enterprise afloat as regards both submarine and other operations. There was a recrudescence of raiding, illustrated by the attack on the Scandinavian convoy—the second of its kind—on December 12, 1917, when the destroyer Partridge and four armed trawlers were sunk;

by the bombardment of Yarmouth from the sea on January 14, 1918, when three persons were killed; by the attempt to break through the barrage in the Dover Straits on February 15, when eight drifters were sunk, and a submarine bombarded Dover; and by the affair of German torpedo craft off Dunkirk on March 21, when the Botha and Morris, with some French destroyers, played a gallant part in beating off the raiders. Further afield, there was the sortie of the Goeben and Breslau from the Dardanelles on January 20, 1918.

It was, in short, a period demanding ceaseless vigilance and redoubled energy on the part of the British seamen and the authorities responsible for conducting the sea campaign. Not unnaturally, there were changes of personnel at the Admiralty, and in certain of the naval commands, but it was made clear both at the time and by later events that these did not involve any change of policy: only an infusion of new blood and war experience. A fresh impulse was thereby given to our naval strategy, particularly in the direction of speeding up and developing the anti-submarine efforts. The results of this forward movement soon became apparent in several directions.

It was pointed out in Chapter CCXII. that the changes made in the composition of the Board of Admiralty during 1917 had for their object the division and better co-ordination of the branches of strategy (operations) and supply (material and maintenance). The further changes during 1918 were the outcome of the experience gained with regard to the working of this new policy. First, as regards operations, the retirement of Admiral Lord Jellicoe provided an opportunity for the appointment of a new First Sea Lord, and for new senior officers in certain high commands, to carry out movements already planned by the War Staff. The important operations for the blocking of the German ports at Ostend and Zeebrugge, which had such far-reaching consequences, were admitted to have been decided upon and arranged for during Lord Jellicoe's tenure of the office of First Sea Lord; and earlier still, such a move had been advocated by Mr. Churchill and Lord Fisher as soon as material was available.

The honour of executing these operations fell upon Vice-Admiral Sir Roger Keyes, who was chosen to succeed Vice-Admiral Sir Reginald Bacon in command of the Dover Patrol. Sir Roger had been in charge of the Submarine Service during the first six months of war, when he saw active service in the Heligoland Bight. He then became Chief of Staff to Admiral de Robeck during the Dardanelles undertaking. Vice-Admiral Sir Reginald Bacon, who had been in command of the Dover Patrol since April, 1915, was appointed in January, 1918, to be Controller of the

VICE-ADMIRAL SIR ROGER KEYES.
In command of the Dover Patrol. Directed the operations against Zeebrugge and Ostend.

Munitions Inventions Department in succession to Colonel H. E. F. Goold-Adams. Another change connected with the strategical or operations branch was the promotion of Commodore Sir Reginald Tyrwhitt to the acting rank of Rear-Admiral. Sir Reginald had commanded the destroyer flotillas and other light forces at Harwich since the early days of the war with consummate skill and gallantry.

Turning to the material side, it was found during the year that the system of a civil Controller of the Navy, instituted when Sir Eric Geddes came to the Board in the spring

of 1917, was unsatisfactory. Consequently, in March, 1918, the War Cabinet appointed Lord Pirrie to the post of Controller-General of Merchant Shipbuilding, without a seat on the Board of Admiralty, and with direct access to the Prime Minister. Being thus relieved of the responsibility for the construction of new

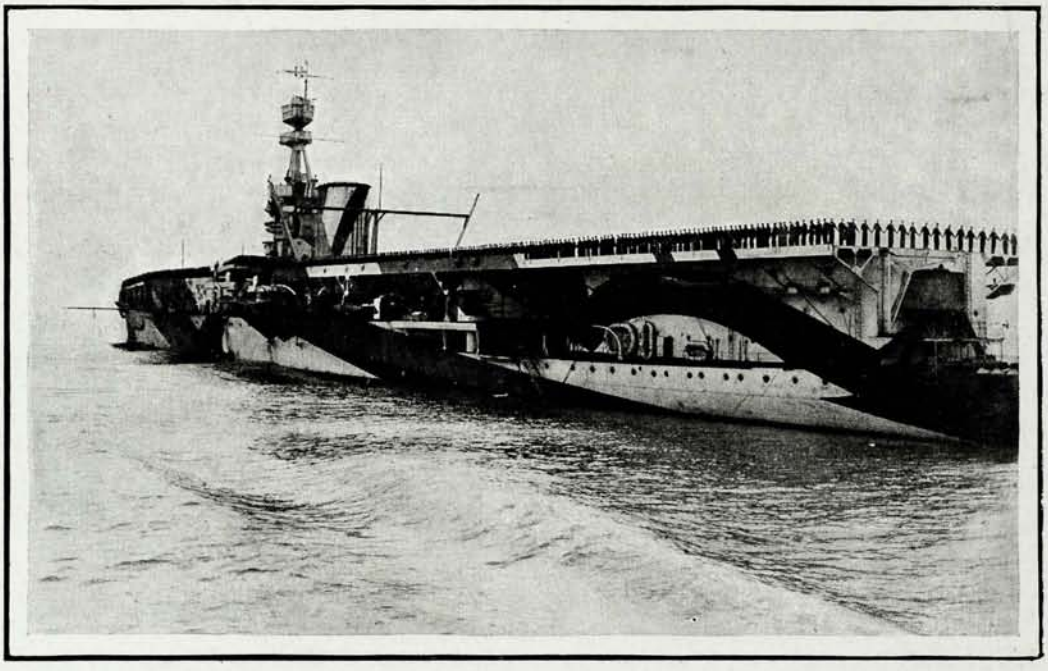
LIEUT.-COLONEL SIR R. HORNE,
Third Civil Lord of the Admiralty.

merchant ships, it was not surprising that the Controller's Department of the Admiralty should once more be placed under the charge of a Naval officer. On June 17, 1918, a new patent provided for the appointment of Commodore C. M. de Bartolomé to the Board, and it was announced that Sir Alan Anderson, who succeeded Sir Eric Geddes as Controller, had resigned that post. Explaining the changes, Dr. Macnamara said that the production departments for warships, auxiliary craft, and naval munitions and armament generally would be placed, with their existing civilian heads, in direct touch with the new Third Sea Lord (Commodore de Bartolomé), who would resume as well the title of Controller. The question of co-ordination of labour supply as between the Admiralty Controller's department and the department of the Controller-General of Merchant Shipbuilding, as also of the priority of materials, was placed in charge of Sir Robert Horne, who joined the Board with the title of Third Civil Lord. Another interesting appointment in accordance with the policy of separating the duties connected with maintenance and supply from the responsibility for strategy and operations was made on July 2, 1918, when Captain F. C. Dreyer, Director of Naval Ordnance, was appointed to the new post of Director of Naval Artillery and Torpedoes, Naval Staff. Captain H. R. Crooke was chosen to succeed him as Director of Naval Ordnance. These reforms, the logical outcome of earlier ones, were all to have their effect and influence on the naval conduct of the war in its concluding phases, the events of which are chronicled in this chapter.

Although there were no fleet actions during the period under review—no dramatic encounters of the battle-squadrons—both in regard to the maintenance of the blockade and to the patrol work on the fringe of the German minefields greater stringency than ever was exercised. Arising out of the latter, several small but significant operations took place, illustrating the manner in which the closer watch and guard kept upon the exits of the German ports operated not only as a check to the submarine activity, but also as an indication to the enemy of what would happen if he ventured out in force. Examples of the British patrol work were afforded by the sweep into the Kattegat on April 15, 1918; and into the Bight of Heligoland on April 20; both of these taking place a few days before the famous operations on St. George's Day for the blocking of Ostend and Zeebrugge. The public revelation of what was going on in the North Sea was very slight, but these events clearly pointed to the more active and virile policy which was at work afloat. On June 19 there was a further sweep into the Heligoland Bight, when the British forces were engaged by German seaplanes. Exactly a month later, on July 19, there were further operations off the coast of Schleswig-Holstein, when the airship sheds at Tondern were attacked. An interesting feature of this last-named affair was the presence in the British squadron of the Furious, from the deck of which remarkable vessel the seaplanes making the raid were launched on their way. One of the last operations of the series was the reconnaissance of the West Frisian coast on August 11, 1918. In this exploit a flotilla of coastal motor boats was hotly attacked by German aircraft, and, although greatly outnumbered, inflicted severe casualties on the enemy, and completed the work of reconnaissance allotted to them.

In addition to their great value in curbing the German enterprises, and inflicting a check upon the submarine campaign, these activities were also the means of putting heart into the

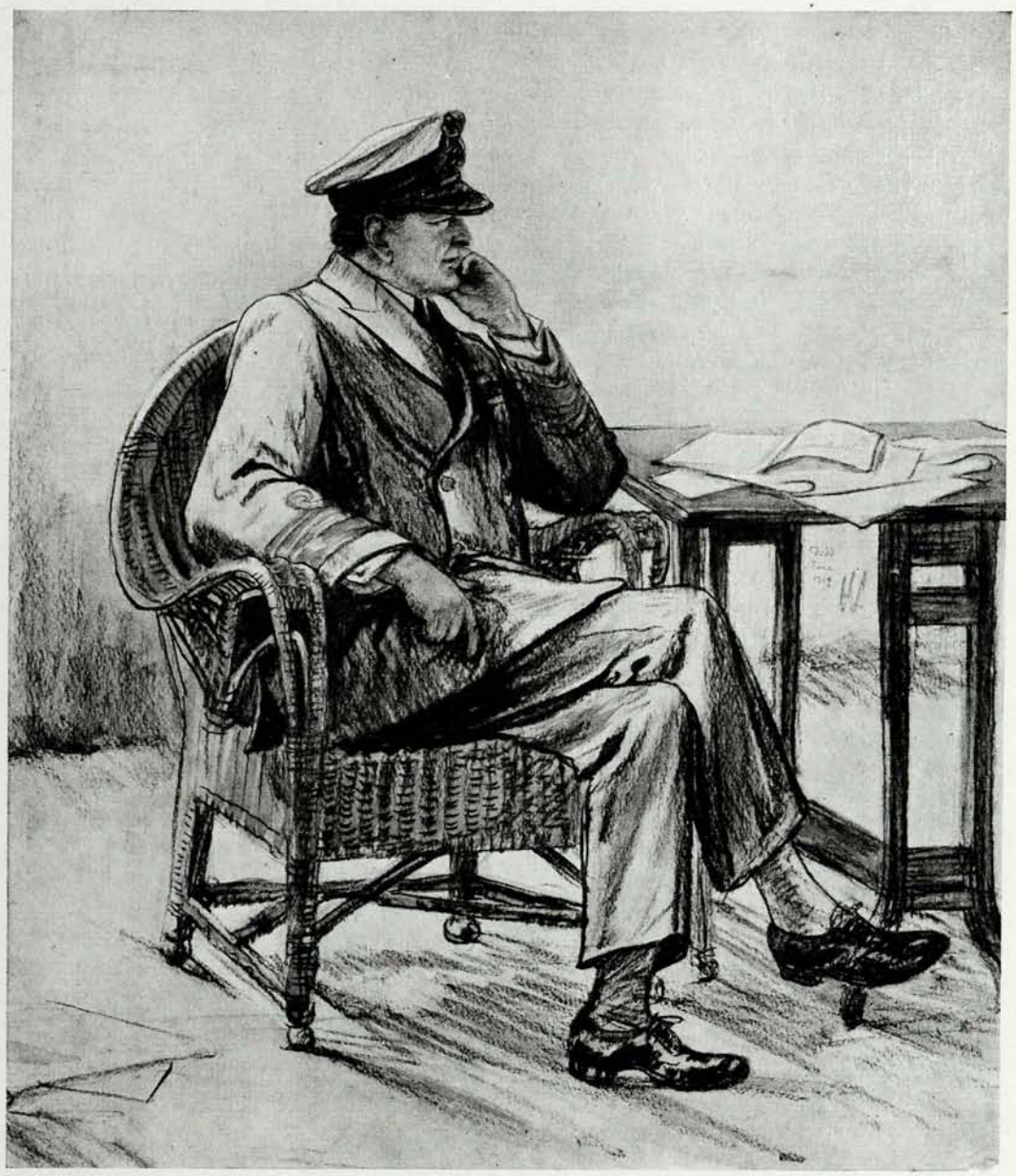
British seamen. They demonstrated afresh that the old spirit of the Fleet was still alive and as vigorous as ever. They helped to remove the natural disappointment that, after so many weary months of waiting, the opportunities of action were denied to Sir David Beatty and his officers and men by reason of the refusal of the Germans to come out. Some idea of the extent of the British activities was given by Sir Eric Geddes on November 9, 1918, when he said that the gradual ringing in of the German force, day and night, in the Bight resulted in a loss in the first six months of 1918 of over one hundred small German surface craft. "The British Navy," he added, "drove its steel into the vitals of the German Navy."



H.M.S. FURIOUS, A "HUSH" CRUISER USED AS AN AERODROME SHIP AND "DAZZLE" PAINTED.

All this activity was backed up by the Grand Fleet, which had been increased in strength not only by additions of British vessels, but by the co-operation of an American squadron, consisting of the battleships New York, Texas, Arkansas, Nevada, Wyoming and Florida, under the command of Rear-Admiral Hugh Rodman. Among the British vessels which joined the Fleet were the so-called "hush" cruisers, so called because of the secrecy maintained about their design and construction. There were five of these immense ships—the Renown, Repulse, Courageous, Glorious and Furious—and they were stated to be nearly 800 feet in length, with a displacement of 30,000 tons, and a speed of from 30 to 35 knots.

The Fleet under Admiral Sir David Beatty showed, therefore, a great preponderance relatively to the German High Seas Fleet, which, according to a Berlin official telegram on August 2, 1918, had passed under the command of Admiral von Hipper, formerly commanding the battle-cruiser squadron, on the transfer of the previous Commander-in-Chief, Admiral Reinold Scheer, to the post of Chief of the Admiralty Staff. When the surrender of the German Fleet took place after the signing of the armistice, it was shown that the British preponderance was even greater than was supposed to be the case in this country. According to Captain Persius, always among the most candid of German naval critics, it was the Jutland battle on May 31, 1916, which shattered all hope of a German naval success. After that engagement, he declared, it was clear to any man with a knowledge of the facts that the High Seas Fleet would never again offer battle except as a measure born of desperation and despair. It was the result of that battle which forced the submarine campaign to be pushed to extremes, and it was the failure of the submarines that led to the mutiny in the Fleet. Many warships were scrapped to find material for submarine construction. The condition of affairs thus depicted by the



[*Official portrait by Francis Dodd.*

ADMIRAL SIR DAVID BEATTY, G.C.B.
Commanded the Grand Fleet.

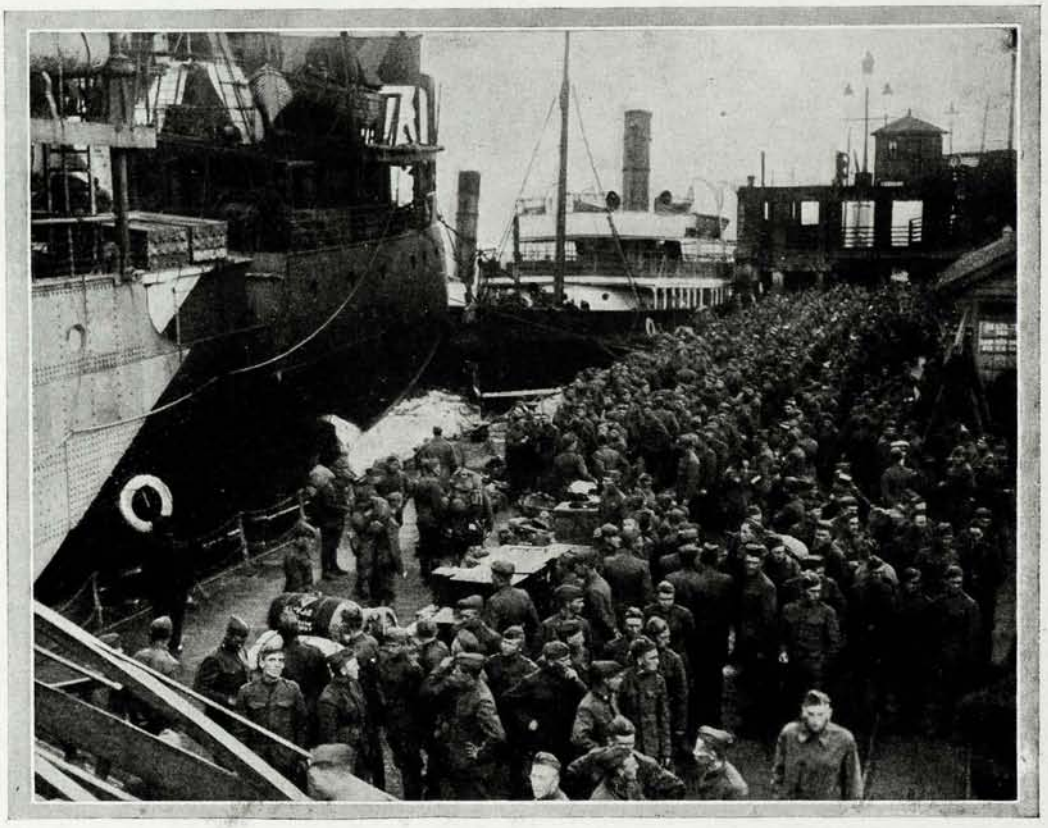
German writer explains the unwillingness of the German seamen to come out and give battle to the British Fleet when ordered to do so.

Very remarkable among the undertakings of the Navy during 1918 was the extension of its convoy work in regard to the transport of troops. Speaking at Leeds on December 7, 1918, Mr Lloyd George referred to a telegram which he sent in March of that year to President Wilson, telling him how essential it was, in view of the German offensive, that we should get American help at the speediest possible rate, inviting him to send 120,000 infantrymen and machine-gunners per month to Europe, and saying that, if he did that, we would do our best to help to carry them. The President replied next day : " Send your ships across and we will send the 120,000 men." America sent 1,900,000 men across, out of which number 1,100,000 were carried by the British Mercantile Marine. The forces required for the efficient protection of so great a number of troops necessitated the provision of additional small craft, and put a great strain upon the anti-submarine flotillas, despite the considerable assistance already given in this direction by the American Navy. The means taken for the safeguarding of both troopships and food carriers were dealt with in the chapter on " Naval Transport and Con-

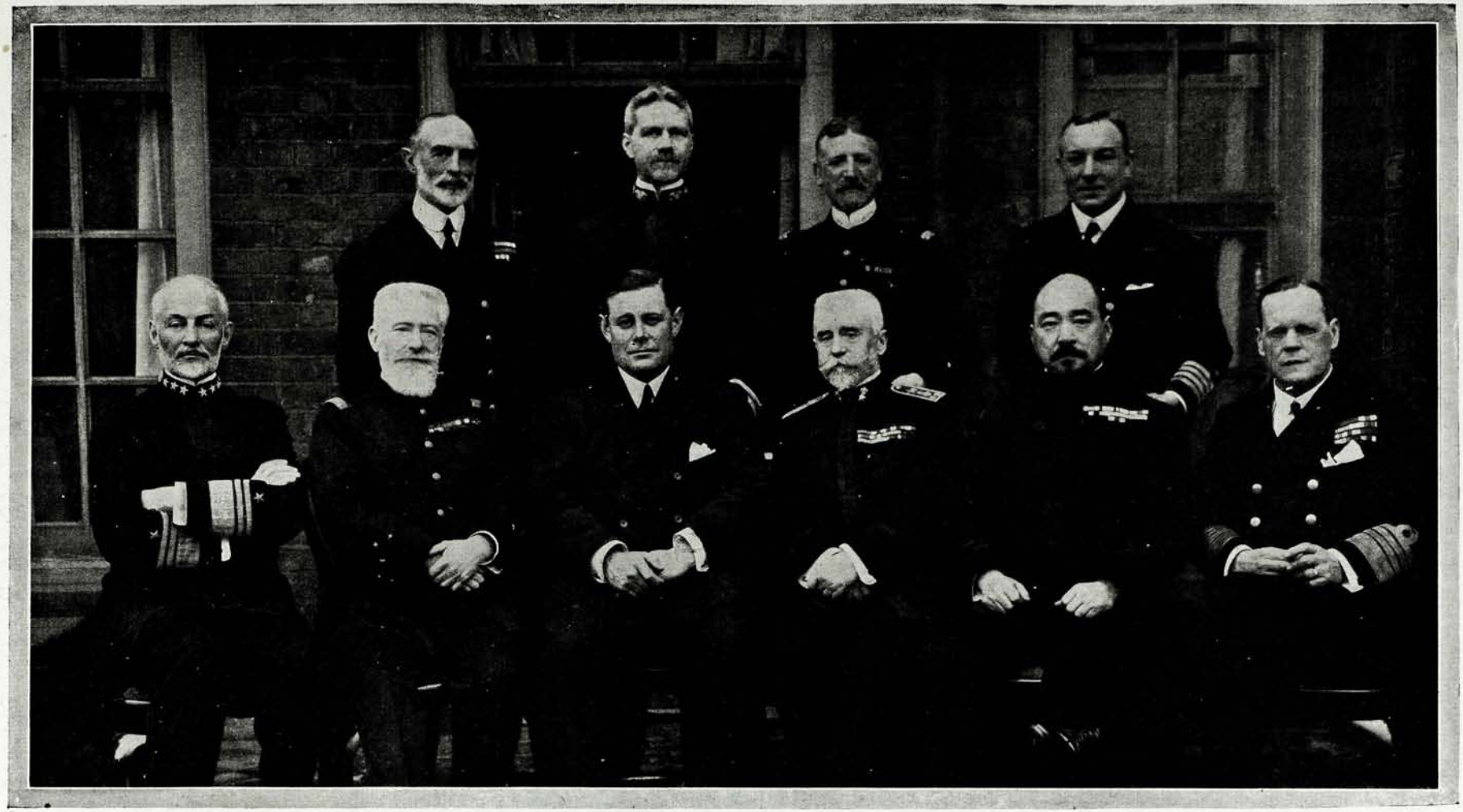
voy" (CCXXXIX.). As Sir Eric Geddes explained on March 5, 1918, the extension of the convoy system to a large proportion of our overseas trade had been a real success. After the Scandinavian convoys, the principle was applied to the Atlantic and Mediterranean traffic. The proportion of losses of ships sailing in convoy was very small. On the other hand, the convoy system reduced the boats available for hunting the submarines, and thus limited to a certain extent the offensive tactics which had been shown to be the best for dealing with the under-water craft.

A significant event in this connexion was the visit paid to the United States by the First Lord of the Admiralty. Sir Eric Geddes admitted later that his chief mission was to appeal to the American shipbuilders to increase their output of anti-submarine craft. In a statement to a representative of *The Times* on October 24, 1918, Sir Eric said that the German submarine effort was decreasing, owing to the naval measures taken against it, up to the month of May, when it became necessary to divert our hunting flotillas, both in existence and in preparation, from submarine chasing to escorting. Since then, owing to the sacrifice of our offensive against the submarine in order that the American troops might be safely brought over, the submarine had been growing upon us, and we had therefore to lay our plans on the assumption that we had a very formidable submarine campaign to face.

The anti-submarine warfare is dealt with fully in a chapter devoted to that subject alone (CCLVII.). Here it will suffice to say that it was not so much the defensive system of convoy—valuable though that was in securing the safe passage of troops—as the constriction of submarine traffic by means of mines, and the loss to the Germans of port accommodation as a result of the naval operations at Zeebrugge and Ostend, coupled with the continuous offensive hunting of the "U"-boats, that shattered the hope of the Kaiser—expressed as recently as his visit to Kiel on September 25, 1918—that the submarine weapon would turn the tide of the war in German favour. A large part in the British success was played by the use of the microphone, or listening apparatus, and the depth charge. So effective were the British offensive tactics against the submarines that the convoy system was not introduced until it became essential for the escort of the American



AMERICAN TROOPS FORMING UP AFTER THEIR ARRIVAL AT LIVERPOOL.



Russell, photo.

THE ALLIED NAVAL COUNCIL.

Left to right: Back row: Rear-Admiral S. R. Fremantle (Great Britain), Capt. M. C. Twining (U.S.A.), Rear-Admiral Baron M. de Lostende (France), Capt. T. E. Crease (Great Britain). Front row: Vice-Admiral W. S. Sims (U.S.A.), Vice-Admiral F. de Bon (France), Right Hon. Sir E. Geddes (Great Britain), Vice-Admiral Count Thaon di Revel (Italy), Rear-Admiral Funakoshi (Japan), Admiral Sir Rosslyn Wemyss (Great Britain).

troops. The First Lord, interviewed by the *Petit Parisien* on June 13, 1918, said: "We attack their submarines seventy times a week on the average." Obviously, to maintain this activity required the employment of large numbers of anti-submarine craft. In the same week, Admiral Sir Rosslyn Wemyss stated to an American correspondent that "we must fight the 'U'-boat in the narrow seas; in other words, we must centralise, concentrating all our forces in what is really the decisive area." In the end the Admiralty accomplished the dual achievement of fighting the submarine and maintaining a huge convoy system. The success of the latter was shown by the statement on November 5, 1918, that the grand total of merchant ships convoyed was 85,772, of which total the losses were only 433.

The naval situation in the Mediterranean during 1918 was influenced very largely by the important decision arrived at in Paris on November 29 and 30, 1917, to create an Allied Naval Council. On introducing his first Navy Estimates in the House of Commons on March 5, 1918, Sir Eric Geddes stated that this Council had referred the question of anti-submarine warfare in the Mediterranean to a Committee to meet at Rome. "The Committee," said Sir Eric, "accepted fully the anti-submarine proposals put forward by Vice-Admiral Calthorpe, the British Commander-in-Chief in the Mediterranean, and it was agreed that we should forthwith adopt and adapt to the Mediterranean the measures which had given such success in the waters around these islands, and that the main anti-submarine operations decided upon should be undertaken under Admiral Calthorpe's orders." A startling episode early on the morning of January 20, 1918, was the sortie of the Goeben and Breslau from the Dardanelles and their destruction of two British monitors off Imbros. When a few weeks later a large part of the Russian Fleet in the Black Sea fell into German hands, fears were entertained that this might portend further sallies of a similar kind, and possibly even an attempt on the part of the Turco-German seamen to join forces with the Austrian Navy in the Adriatic.

Nothing of this kind occurred, however, and eventually the command of the sea exercised by the Allied Fleets in the Mediterranean—supported and covered, of course, by the Grand Fleet in the North Sea—was destined to exert a potent and decisive influence on the war. The collapse of Bulgaria was brought about by a military force based on Salonika, the sea communications of which were protected and kept free by the Navy. The collapse of Turkey was similarly the outcome of the brilliant victories of General Allenby's troops, in Palestine, with their left flank on the coast, covered by the Fleet. The collapse of Austria-Hungary was the inevitable sequel to the exit of these two Powers in the Middle East, and this third collapse was expedited by a series of

VICE-ADMIRAL THE HON. SIR S.A. GOUGH-CALTHORPE, K.C.B.
Commanded in the Mediterranean.

brilliant strokes delivered against the Austrian ports in the Adriatic. In short, the long arm of sea power swept all before it in the Mediterranean, which in an astonishingly short space of time, from a difficult and doubtful theatre of the war, became an Allied lake.

It has already been indicated that towards the close of 1917 there was a renewal of the German sallying tactics with surface ships. The unfortunate attack upon the Scandinavian convoy on October 17, 1917, when the Mary Rose and Strongbow were sunk (Chapter CCXII.), was repeated on December 12, 1917, when the destroyer Partridge was sunk and the Pellew damaged. The convoy consisted of one British and five neutral ships, and totalled about 8,000 tons of shipping. In addition to the two destroyers, there were four armed trawlers in the anti-submarine escort. The Partridge sighted four enemy destroyers at 11.45 a.m., and with the Pellew engaged them while the convoy scattered in accordance with orders. An explosion occurred in the Partridge and she sank, and the Pellew was

also holed on the water-line and disabled, but not sufficiently to prevent her return to port. The Germans then sank the entire convoy and the four armed trawlers. Eighty-eight Scandinavians and 10 British survivors were rescued by four destroyers which were detached at full speed from a cruiser squadron which was hastening to the scene. Lieutenant A. A. D. Grey, a nephew of Viscount Grey, was among the survivors from the Partridge. In a statement on this incident on January 14, 1918, Sir Eric Geddes said that a Court of Inquiry appointed by Sir David Beatty had reported that the escorting vessels did their best to protect the convoy, and were fought in a

RT. HON. T. J. MACNAMARA.
Financial Secretary to the Admiralty.

proper and seamanlike manner, and that the other forces which were at sea for the purpose of giving protection to the convoys which were crossing the North Sea at the time took all possible steps to come to their assistance as soon as the attack was reported to them, and to prevent the enemy's escape. The Board of Admiralty confirmed the finding of the Court, and were of opinion that the Commander-in-Chief's dispositions were the best that could have been made with the forces available at the time.

On the same morning as the convoy attack, the Germans raided fishing craft off the Tyne. The steam trawlers Ranter and J. J. Smart were attacked by gunfire, the former being damaged and the latter sunk. Eight men were killed on both trawlers. In addition to the trawlers, two neutral merchant ships were sunk about the same time. They had become separated during the previous night from a south-bound convoy, and the vessels escorting the latter were unaware of the attack owing to the distance separating them. According to the Berlin report, Captain Heinicke was in command of the German forces, which returned without loss or damage. The episode was naturally lauded to the utmost extent in Germany. Said the naval critic of the *Vossische Zeitung*: "It is partially fear of German 'U'-boats and partially the necessity to save fuel and lubricating materials which permits the Admiralty to send its powerful fighting ships up north only rarely. Our Black Hussars of the Sea are indeed making life a burden for John Bull!"

In addition to activity in the North Sea, the enemy was busy along the western seaboard of the British Isles at this time. In the Irish Channel the losses during December, 1917, included that of the armed boarding-steamer Stephen Furness, Lieutenant-Commander T. M. Winslow, R.D., R.N.R., which was torpedoed and sunk by a submarine on the 22nd, with the loss of six officers and 95 men, including the mercantile crew. Elsewhere, the mine sweeping sloop Arbutus, Commander C. H. Oxlade, R.D., R.N.R., foundered in very severe weather after being torpedoed, her commander, one other officer, and seven men being missing and presumed drowned. The armed boarding steamer Grive, Commander S. A. Pidgeon, R.D., R.N.R., also foundered in bad weather after being torpedoed, but without loss of life. Both these casualties were announced officially on December 31. There were also mining mishaps. One such occurred in the mouth of the Mersey on December 28, 1917, and when questioned in Parliament on January 23, Dr. Macnamara stated that the steamer struck a mine which was no doubt laid on the same night a few hours previous to the loss. Only two men were saved, out of the 43 on board, which included 16 pilots.

There were also the accidents due to the ordinary hazards of sea service under war conditions. On January 9, 1918, about 2 a.m., the destroyer Racoon, Lieutenant G L. M. Napier, R.N., in command, struck some rocks off the north coast of Ireland during a snowstorm, and subsequently foundered with all hands. Nine of the crew had been left behind at her last port of call, and these were the sole survivors. The Admiralty announced on January 12 that 17 bodies of the crew had been

picked up by patrol craft and were being buried at Rathmullen, Lough Swilly, Co. Donegal. Five more bodies had been washed ashore and were being buried locally.

Other destroyers, the names of which were not disclosed, were lost by stranding or collision during the winter. On January 28, also, in the English Channel, the torpedo gunboat Hazard was sunk as the result of a collision, three men being lost. On the night of February 8, 1918, the destroyer Boxer was sunk in the Channel as the result of a collision. One boy was missing.

Early in the New Year the Germans repeated, as it turned out for the last time, an attack upon the east coast of England by surface craft. On the night of January 14 Yarmouth was bombarded from the sea. Fire was opened at 10.55 p.m. Four persons were killed and eight injured. The material damage done was

THE SINKING OF THE MARY ROSE.

not serious. A florid German statement spoke of the raiders advancing to the north of the "mouth of the Thames close to the English coast," where the important port establishments were effectively shelled, over 300 rounds being discharged. To this the Admiralty replied that the actual facts were that the town of Yarmouth, situated nearly 100 miles to the north of the mouth of the Thames, was

LIEUT.-COL. F. A. BROCK, R.A.F.
Who lighted the Dover barrage and invented the "Smoke Screens" used in the attacks on Zeebrugge and Ostend.

subjected to bombardment in the pitch darkness, lasting about five minutes, when the enemy craft withdrew. Careful investigation proved that approximately fifty small shells fell in or near the town during this period, and no other shells fell on any other part of our coast during that night.

According to published information, this was the last occasion upon which any portion of Great Britain was subjected to enemy attack from the sea by ordinary warships. A submarine raid on Dover, however, occurred at about 12.10 a.m. on February 16, when fire was opened and continued for about three or four minutes. The shore batteries replied, and the enemy ceased fire after discharging about thirty rounds. Slight damage was caused to house property, and one child was killed, seven persons being also injured. This piece of impudent devilry was associated with other operations connected with the protective barrage in the Dover Straits, referred to later. Some months afterwards, what was apparently the last incident of this kind before the conclusion of hostilities occurred when a submarine shelled St. Kilda. This island in the Outer Hebrides' according to a statement of Dr. Macnamara on October 17, 1918, was shelled by a "U"-boat, and the church and other buildings damaged—a pure act of vandalism.

It may not be amiss to summarize here the war incidents which went to make up the trying time spent by the inhabitants of Dover during the four years and three months' fighting. The town was attacked by Zeppelins, seaplanes, aeroplanes, destroyers, and submarines. The first German air bomb was dropped on the day before Christmas, 1914, at the back of St. James' Rectory. Dover had 113 warnings, and on 29 occasions bombs and shells were dropped into the town itself. The first moonlight raid occurred on January 22, 1916, when a man was killed and six people injured. The record number of bombs dropped in one night was 42, on September 24, 1917. Altogether 185 bombs dropped on the town, and 23 shells, and the material damage wrought amounted to about £30,000.

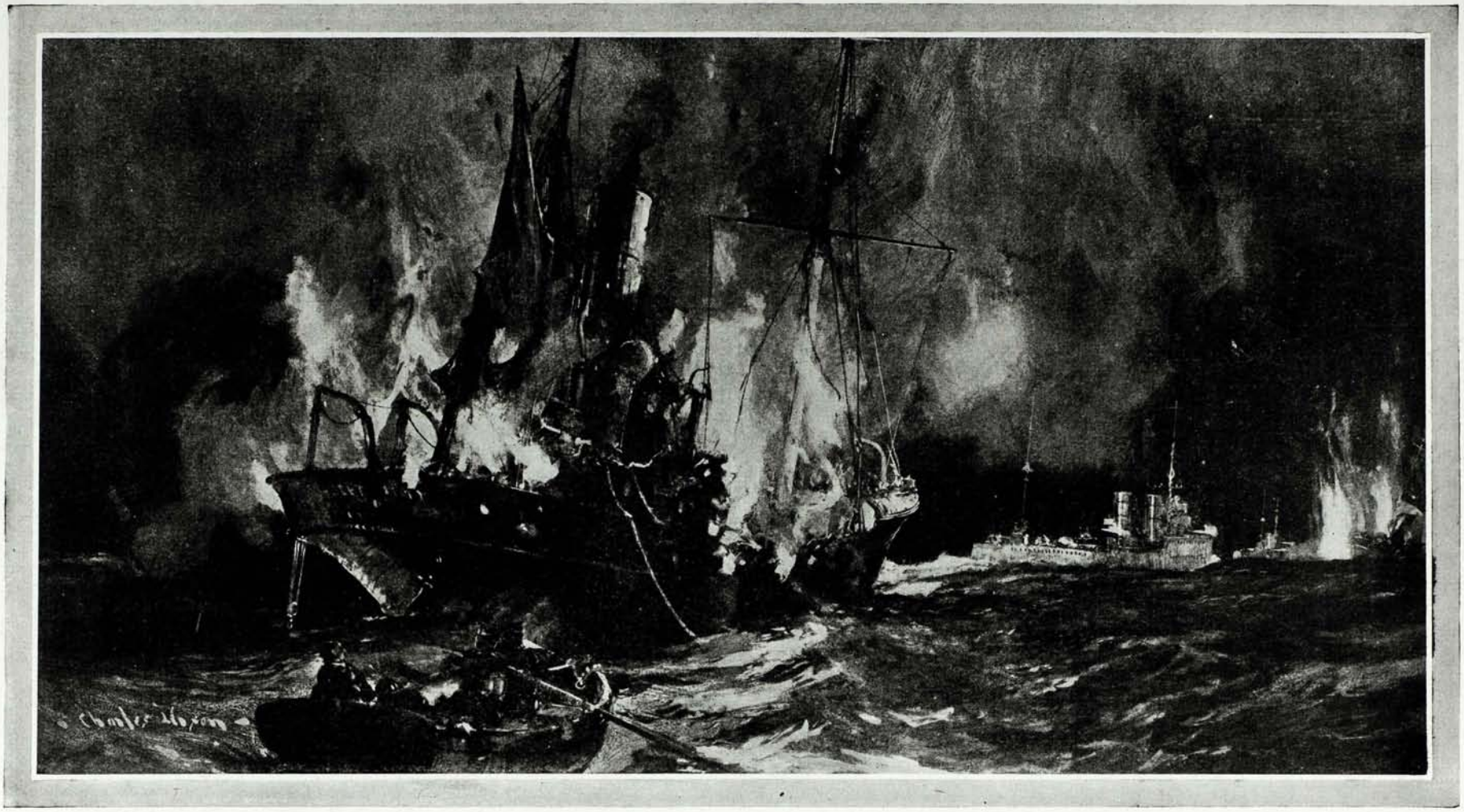
The extensive barrage which had been established in the Dover Straits had been most successful in closing this passage to the submarines wishing to interfere with the Channel traffic. The composition of this barrage was described by Vice-Admiral Sir Roger Keyes, commanding the Dover Patrol, on the occasion of the presentation to him on December 12, 1918, of the honorary freedom of the Borough of Dover. The barrage, with powerful searchlights, first consisted of an invention of Commander Brock, who fell at Zeebrugge. Later there were searchlights on board specially built ships which could ride out the heaviest gale at anchor. One line of those ships was from Folkestone to Gris Nez, and another across the Channel seven miles farther westward. In the dark interval between were scores of drifters and obsolete patrol craft, the patrol being so close that it was impossible for anything to pass through on the surface. Underneath were other anti-submarine measures. The duty of the patrol craft was to attack enemy submarines which attempted to get through on the surface, to use depth charges when they dived, and to drive them down on to the hidden perils below.

So successful were these measures, said Admiral Keyes, that by September, 1918, the enemy submarines based on the Flanders coast gave up attempting to get through the Straits of Dover, and there was the most absolute proof from enemy sources that between January and September 1 this year the Flanders flotilla lost 30 submarines. Of these 15 had been definitely identified lying under the lighted barrage patrol, and two others just outside it. There were many others, added Sir Roger, which had not yet been identified but which were known to be there.

It was on January 12, 1918, that the official announcement was made that Vice-Admiral Sir Reginald Bacon, who had commanded the Dover Patrol since April, 1915, had joined the Ministry of Munitions. It was about this time that the Germans showed a certain enterprise, as if they were ready to turn to advantage any weakening in the British methods for the defence of the Straits. On the morning of February 15, 1918, there occurred what looked like a serious attempt to break down the Allied drifter line, probably with the idea of passing submarines through into the Channel. At about 1 a.m. a raid was made by a flotilla of enemy destroyers on the patrol forces in the Straits. The following craft in the patrol were sunk :—Trawler James Pond and Drifters Jamie Murray, Clover Bank, W. Elliott, Cosmos, Silver Queen, Veracity, and Christina Craig. The British official statement said : "After having sunk these vessels the enemy forces returned to the north before the British forces could engage them." Commenting on this episode in the House of Commons on February 20, Dr. Macnamara, speaking for the Admiralty, said that much as we might regret the measure of success which followed the enemy's flying visit, involving as it did the loss of gallant lives on board the trawler and drifters, to build upon that the contention that German raiders could operate with success in the Channel near Dover was entirely unjustified by the facts.

The affair of February 15 was one of several attempts by the Germans to raid the barrage for the purpose of enabling submarines to slip through, none of which came to anything. One attempt of the kind met with a spirited repulse from the destroyers of the Dover Patrol. This was on March 21, also in the early morning, when a German destroyer force which had bombarded Dunkirk for ten minutes was brought to action by two British and

TRAWLER WHICH STRUCK A MINE WHILE MINE-SWEEPING.



THE ATTACK ON THE DOVER PATROL, FEBRUARY 15, 1918: THE VIOLET MAY ON FIRE.

This ship, after being abandoned by the only two survivors (Chief Engineer J. Ewing and Second Engineer A. Noble), was re-boarded by them and safely brought into port. See the illustration on page 340.

three French destroyers. It was reported that two enemy destroyers and two enemy torpedo boats were believed to have been sunk, survivors being picked up from the latter. No Allied vessels were sunk, and although one British destroyer was damaged she was able to reach harbour.

About eighteen German vessels took part in this raid. According to the French official report, they were in three groups, which had been ordered to bombard respectively Dunkirk, La Panne, and Bray Dunes. The British destroyers Botha, Commander R. L. M. Rede, R.N., and Morris, Lieutenant-Commander P. R. P. Percival, with three French destroyers —the Mehl, Magon, and Bouclier—were on patrol, and, hearing gunfire, made for the flashes, led by the Botha. Star shells were fired to light up the enemy, and this was the means of stopping the bombardment. The raiders attempted to steam away, but the Allied force challenged them. The Morris cut off one large German destroyer, which she torpedoed and sank at 500 yards range. Meanwhile the Botha's main steam pipe was severed by a stray shell, causing her to lose speed, and her commander, firing both torpedoes, made for the fourth boat in the line and rammed her, cutting the enemy completely in half. Swinging round again, the Botha attempted to repeat the coup on the next astern, but the latter managed to elude her, and fell a victim to the torpedoes and guns of the French destroyers. The Morris had by this time relinquished the pursuit, and returned to the scene of action to take in tow her lame sister, the French destroyers circling round picking up prisoners.

It was on receipt of the news of this encounter on March 21—the day on which the German military offensive was launched on the Western front—that Field-Marshal Sir Douglas Haig telegraphed to Vice-Admiral Sir Roger Keyes: "Delighted to hear of your naval success off Dunkirk last night. Heartiest congratulations to you and all who took part in it."

It was essential to put a check to these raids from the Belgian ports, a fact which had been recognized for a long time. The difficulties were great, and without the aid of a military force almost insurmountable by the Navy. After the evacuation of Antwerp on October 9, 1914, and the withdrawal of the Allied troops towards the French frontier, the enemy swept down upon the coast and there found suitable bases from which to initiate harassing operations with his torpedo craft. During the early months of the German occupation, and when the enemy yet hoped to push on to Calais, but little was done in the way of permanent fortification on this part of the coast. That was the period when the British monitors and gunboats assisted the Allied Armies in resisting the hostile advance. When, however, it became clear that their onward movement was checked, the Germans turned their attention to the utilization of Ostend and Zeebrugge for the purpose of aggressive naval effort.

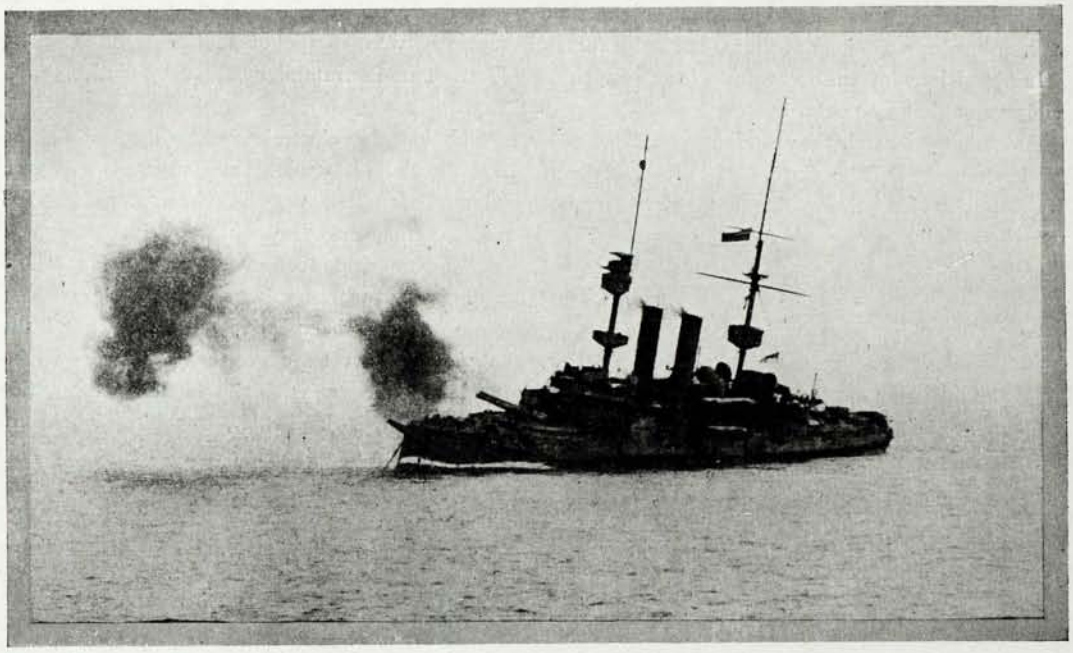
The waters opposite the Flanders shore are shallow, with shifting sand-banks and many shoals. Heavy warships of large draught are therefore unable to approach, and the channels both to Zeebrugge and Ostend are narrow and tortuous, making entrance far from easy even for small craft, and until dredging operations had been carried out the submarines based on these ports were light vessels sent overland in sections to be put together at Antwerp and then transported by canal to the sea. From Bruges there are two canals to the coast, one to Ostend and the other to Zeebrugge—the latter, the much wider and deeper straight-cut, intended for the purpose of carrying sea-borne traffic. These canals are connected by locks with the artificial harbours constructed at each port. That at Zeebrugge is partly enclosed by a long stone breakwater joined to the land by a railway viaduct, and between the ports the coast is formed by a chain of sand-dunes, which provided cover for the heavy batteries erected behind them.

The enemy quickly got to work at the two ports, and especially at Zeebrugge, where military store-houses and workshops were constructed, and preparations of many kinds made for the conversion of the harbours into defended positions for submarine and destroyer operations. The docks and shipbuilding yards at Bruges were largely extended, and aerodromes erected from which raids could be made upon this country. During 1915, offensive measures were taken against the two seaports by flotillas of British monitors and other craft, and their headquarters at Bruges was bombed by the Naval Air Service stationed at Dunkirk. In that year the enemy torpedo-craft, and especially the minelayers and other submarines, constituted a distinct menace to the traffic passing through the Straits of Dover. The

Harwich and Dover Patrols, however, did excellent work, and were most vigilant in counteracting the threat of the enemy, while the aircraft inflicted a considerable amount of damage upon the works of military importance.

In the course of the following year the enemy showed much greater activity, both in the provision of batteries on the coast and in the forays made by their submarines and destroyers upon the trade on the English coast. The systematic dredging of the channels permitted the use of much more powerful destroyers and larger submarines. Mining was carried out to a very wide extent, making still more difficult the approach to the beach, and guns of large calibre and long range were mounted in the fortifications. The digue at Ostend became a fortress, and was described as a town of dug-outs, of concrete works, of gun-platforms, and of block-houses. The Tirpitz battery near the same place was furnished with very heavy guns capable of a range of over 30,000 yards, and these guns were protected by cupolas of thick armour. Similarly, at Zeebrugge, the coast bristled with ordnance in large numbers of heavy calibre up to 15-inch. It was said that between 120 and 150 heavy pieces of artillery were mounted among the dunes at the back of the beach. At the end of the breakwater or Mole at Zeebrugge, where there was a lighthouse with searchlight and range-finder, a battery of powerful guns, strongly protected, was placed, and on the breakwater itself, in addition to the railway terminus, there was a seaplane station, barracks for personnel, and sheds for stores and other material, with machine-gun positions for their defence. Unfortunately, while the Germans were making progress with their defensive and offensive preparations, our measures of interference with their activity were not on the same scale, nor were they pushed with the energy which had formerly been so marked. Towards the end of 1916 the raids and forays of the enemy craft working from the Belgian bases had become so frequent and were characterized by such audacity and determination as to attract general attention in England, and cause something like a feeling of apprehension in the south-eastern counties. The raids upon the Kentish coast and the attempts to pass the Dover Straits made at this time, and how they became considerably diminished after the extremely gallant and successful action in which the flotilla leaders Broke and Swift distinguished

THE TWO SURVIVORS OF THE VIOLET MAY WITH THE SHATTERED WHEEL AND BINNACLE OF THEIR SHIP.



FIRING INTO THE BATTERIES ON THE DUNES.
The ship has been given a list to increase the range of her guns.

themselves, have been described in previous chapters.

It was many times urged upon the authorities that the only satisfactory method of dealing with the menace from the Flanders ports would be to destroy the ports and render them useless as lairs for the enemy craft. The tons of high explosive dropped from the air and the intermittent bombardment at long intervals of the fortifications, while these resulted in extensive damage, were insufficient and inadequate by themselves. Something on a larger scale and of a more permanent character in the way of destruction was required to be really effective. Proposals for blocking the canals had been made as early as the first months of the war, but nothing came of them. When Sir Edward Carson and Lord Jellicoe had succeeded Mr. Balfour and Sir Henry Jackson at the Admiralty in the early part of 1917 a definite plan of action for this purpose was seriously considered.

It was not until November, 1917, that the project materialized in the Plans Division of the Admiralty, at the head of which was a young flag officer named Roger Keyes. In this division a great scheme, having for its purpose the blocking of Zeebrugge, of the ship canal, and a similar undertaking at Ostend, was prepared and elaborated, and when it had obtained official sanction and encouragement, the talented and energetic Admiral under whose direction it had been drawn up was sent down to Dover to relieve Sir Reginald Bacon in command of the patrol for the purpose of putting it into execution. The great adventure took place in the early morning of April 23, St. George's Day.

The plan as arranged was to use certain obsolete vessels filled with concrete for sealing up the two harbours, while, at the same time and with the object of diverting attention from these block-ships, an attack was made on the battery and other establishments on the Mole at Zeebrugge and the railway viaduct connecting the breakwater with the shore blown up. It was essential to success that the enterprise should be a complete surprise and that both the blocking ships and the party attacking the Mole should reach their objectives before the heavier batteries of the enemy could put them out of action. As the storming of the Mole was intended to distract the attention of the defenders, this operation was timed to begin before the blocking-ships appeared, and thus to take the first brunt of whatever artillery fire the enemy could bring to bear. In order to screen the movements of the attacking vessels, an artificial fog or smoke mist, which had already been found to work satisfactorily, was to be made by the small craft which were to accompany the larger vessels and take part in rescuing their crews. Also, as a further diversion, while these vessels were making their approach to the ports, a force of monitors

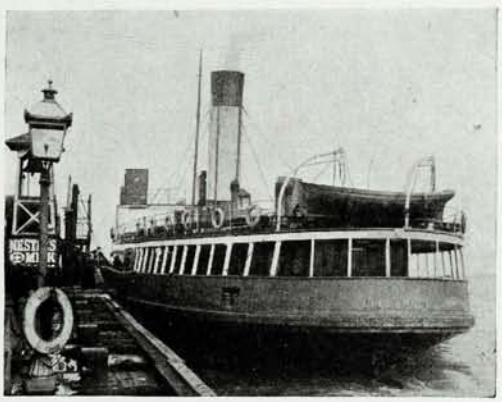
and aerial bombing machines was to set up a bombardment of the shore batteries and other positions of military importance in the vicinity of the two ports.

As already stated, the conduct of the whole business was in the hands of Vice-Admiral Keyes. Six old cruisers selected for the purpose were specially prepared for the expedition.

BRUGES DOCKS AND THE APPROACHES FROM OSTEND AND ZEEBRUGGE.

The Vindictive was to carry out the attack upon the Mole and had been supplied on the side which would be nearer the breakwater with a high false deck, fitted with brows or gangways by which the storming and demolition parties she carried were to land. Accompanying her were two old Mersey ferry-boats, the Iris and Daffodil, also carrying part of the landing force, and the Daffodil, it was also arranged, was to push the Vindictive against the breakwater if the grappling-irons with which she was fitted failed to effect their purpose. The Vindictive was commanded by Acting-Captain A. F. B. Carpenter, R.N., the Iris by Commander Valentine Gibbs, R.N., and the Daffodil by Lieutenant H. G. Campbell, R.N. The commands of the various landing parties were distributed as follows: The Naval brigade under Acting-Captain H. C. Halahan, D.S.O., R.N., and the Royal Marines under Lieutenant-Colonel B. N. Elliot, D.S.O., R.M.L.I., with Lieutenant-Commander A. L. Harrison, R.N., and Lieutenant C. C. Dickinson, R.N., in charge of the storming and demolition bodies respectively. Two submarines were detailed to blow up the viaduct; one of these was commanded by Lieutenant A. C. Newbold, R.N., and the other by Lieutenant R. D. Sandford, R.N., and attached to these submarines was a picket-boat commanded by Lieutenant-Commander F. H. Sandford, D.S.O., R.N.

The vessels selected for blocking were, like the Vindictive, ancient and obsolete cruisers, which before the war had been fitted out as minelayers. For their present purpose they had been stripped of everything except their engines and armament, and in addition to the concrete carried explosives to blow their hulls to pieces when they grounded. Those to be used at Zeebrugge were the Thetis, Commander R. S. Sneyd, D.S.O., R.N., Intrepid, Lieutenant S. S. Bonham Carter, R.N., and Iphigenia, Lieutenant E. W. Billyard-Leake, R.N., who at the last moment replaced Lieutenant I. B. Franks, R.N., who had to go to hospital for an operation. For the Ostend undertaking the ships chosen were the Brilliant, Commander A. E. Godsal, R.N., and Sirius, Lieutenant-Commander H. N. M. Hardy, D.S.O., R.N. A flotilla of motor vessels under the command of Captain Ralph Collins, R.N., and Commander Hamilton Benn, M.P., R.N.V.R., with another of coastal motor-boats under Lieutenant Welman, R.N., were charged with the duty of assisting the block-ships in finding their objectives, making the smoke screens, and aiding the crews of the sunken vessels to make their escape.

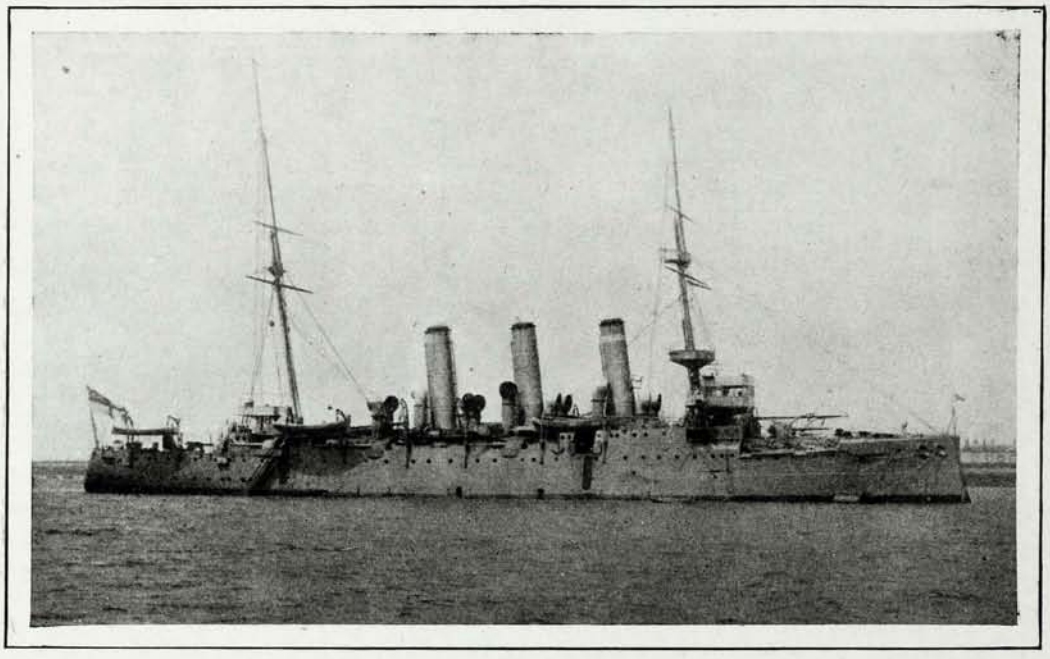


THE IRIS.
(The Daffodil was a similar boat.)

Three destroyers were also assigned duties in the attack, the North Star, Lieutenant-Commander K. C. Helyar, the Phœbe, Lieutenant-Commander H. E. Gore-Langton, R.N., and the Warwick. In the last-named Vice-Admiral Roger Keyes flew his flag, and from her he directed the whole operation. The admiral's final signal as the Vindictive advanced

to the attack was a reminder of the day, "St. George for England!" and the reply made by Captain Carpenter was, "May we give the Dragon's tail a damned good twist!"

Altogether between 70 and 80 ships and boats took part in the affair; but, in addition, the naval force at Harwich, under Rear-Admiral Sir Reginald Tyrwhitt, D.S.O., and the Grand Fleet in the North Sea, were on the alert to prevent any attempt from the German Bight to interfere with the proceedings. A small French contingent from Dunkirk also participated.

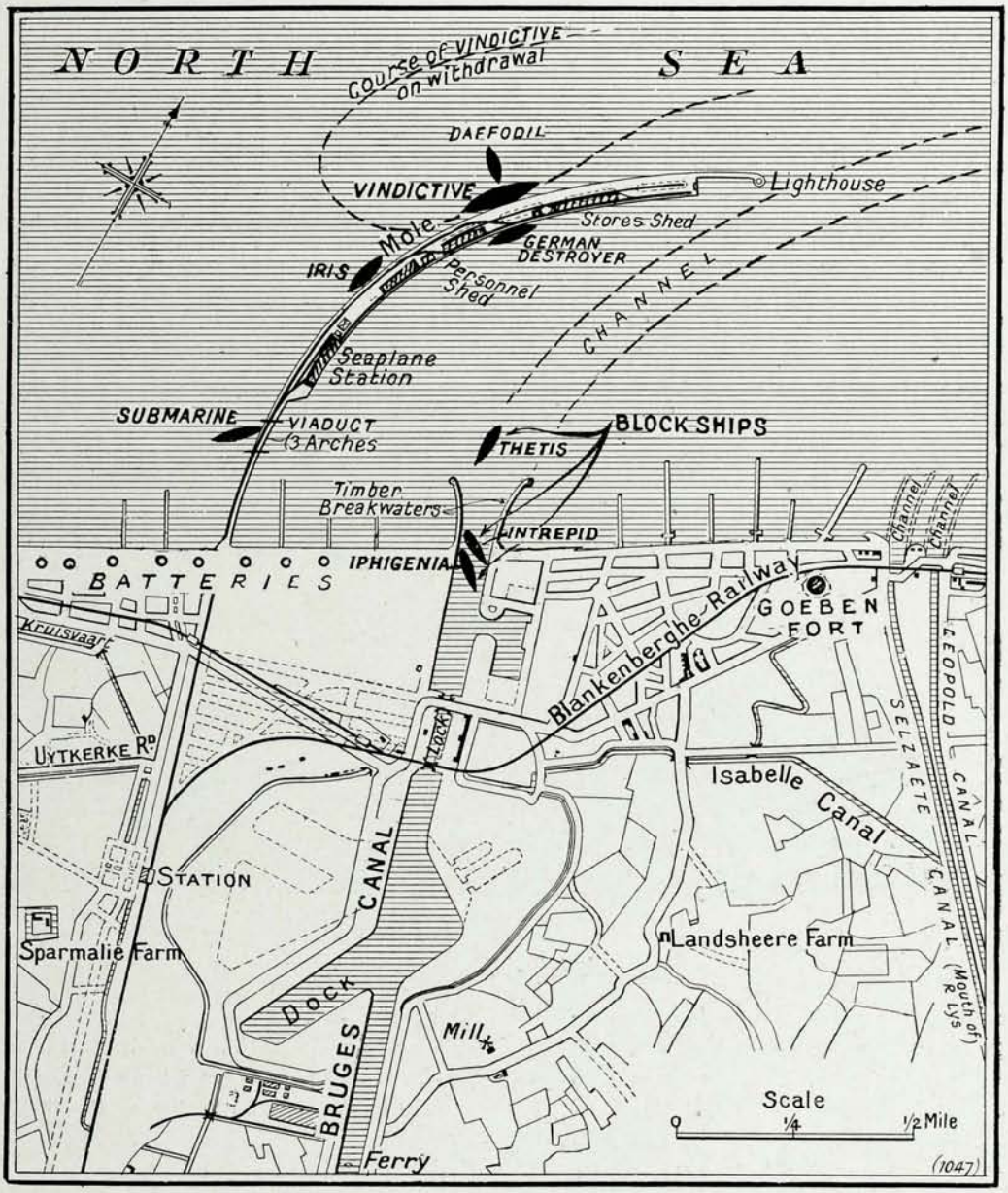


H.M.S. VINDICTIVE.
As she was when first commissioned in 1898.

The following graphic account of the daring exploit was given by Captain Carpenter:

"Once it had been decided to make an attack on the Mole we had to have a large number of men to carry it out, and to obtain suitable ships. So the Grand Fleet, the main naval depots, and the various Commands, such as Dover, were asked to lend a certain number of the most suitable men they had. These men were given to understand that they were going on a hazardous enterprise, so far as I know, and therefore one can say that they volunteered for it, although they were not actually told at the time what they were going to do. However, before the operation actually took place every man had to be informed quite clearly what was expected of him, because one fully realized that every officer might be knocked out and the men would be entirely on their own. Then the men undoubtedly had a chance of saying that they did not want to go, perhaps for family reasons; but, so far as I know, there was not a single case of a man asking to be left behind. To my knowledge, in fact, in one ship (the Intrepid), where orders had been given that certain men were to be left behind, those men in almost a mutinous spirit came up before the captain and said they absolutely refused to leave the ship. As it happened, in this particular case, owing to a slight hitch, the extra crew of this ship were not taken off. The whole of the men went into Zeebrugge Canal in the block ship, and the whole of them were saved and brought back.

"The nature of the operation was such that it required the use of a very large number of small craft, and the trip across the sea being rather over a hundred miles each way made it necessary that the weather should be fine. At the same time the wind had to be on-shore, so that we could use our smoke screens effectively. At the same time, too, the operation had to be carried out at high water, so as to allow the block ships to get in. Again, owing to the presence of a large number of German guns on the Belgian coast, it was necessary to carry out the operation at night, and it was fully realized that if it were carried out in the latter part of the night—that is to say, by the morning twilight—there was practically no chance of any ship getting away in the early



THE BLOCKING OF ZEEBRUGGE.

morning when they could be seen from the shore. It was, therefore, a rather complicated combination of conditions that we required, and during the period that we were waiting for a suitable day the disappointments were very great. Before the operation took place we had all gone over to within a few miles of our objectives and had to turn back owing to impossible weather conditions suddenly arising, and it was with very anxious hearts that we waited for suitable weather conditions to occur, realizing that every day we waited made a greater chance for the news of the impending operation to leak out and get across to Germany and for preparations to be made over there to defeat the operation at the outset. The chances of the vicinities of Zeebrugge and Ostend being heavily mined were considerable, and the risk of this had to be taken.

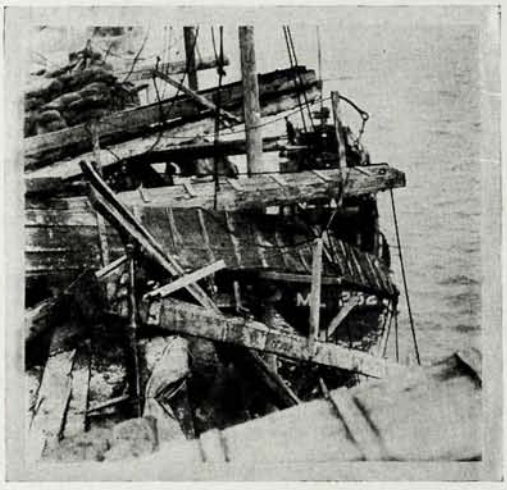
"At last the opportunity we had waited for so long arose, and everybody started off in the highest spirits and with no other thoughts than to make the very greatest success of the operation that we could possibly do. Fate was very kind to us on the whole, and everything went well, almost as per schedule. The various phases of the operation depended on accurate timing of the work of the various units. The smoke screen craft and the fast motor-boats at given intervals rushed on ahead at full

speed, laid their smoke screens, attacked enemy vessels with torpedoes, and generally cleared the way for the main force, in addition to hiding the approach of the latter from the shore batteries. Meanwhile, a heavy bombardment was being carried out by our monitors, and the sound of their firing as we approached was one of the most heartening things that I can remember. On arriving at a certain point some considerable distance from shore the forces parted, some going to Zeebrugge and some to Ostend, the idea being the forces should arrive at the two places simultaneously, so that communication from one place to the other could not be used as a warning in either case. Precisely at midnight the main force arrived at Zeebrugge and two of the block ships arrived at Ostend.

"At midnight we steamed through a very thick smoke-screen. German star shells were lighting up the whole place almost like daylight, and one had an extraordinary naked feeling when one saw how exposed we were although it was in the middle of the night. On emerging from the smoke-screen the end of the Mole, where the lighthouse is, was seen close ahead, distant about 400 yards. The ship was turned immediately to go alongside and increased to full speed so as to get there as fast as possible. We had decided not to open fire from the ship until they opened fire on us, so that we might remain unobserved to the last possible moment. A battery of five or six guns on the Mole began firing at us almost immediately from a range of about 300 yards, and every gun on the Vindictive that could bear fired at them as hard as it could.

"In less than five minutes the ship was alongside the Mole, and efforts were made to grapple the Mole so as to keep the ship in place. The Daffodil, which was keeping close astern, came up, and in the most gallant manner placed her bow against the Vindictive and pushed the Vindictive sideways until she was close alongside the Mole. There was a very heavy swell against the Mole. The ships were rolling about, and this made the work of securing to the Mole exceedingly difficult.

"When the brows were run out from the Vindictive the men at once climbed out along them. It was an extremely perilous task, in view of the fact that the end of the brows at one moment were from 8 ft. to 10 ft. above the wall and the next moment were crashing on the wall as the ship rolled. The way in which the men got over those brows was almost superhuman. I expected every moment to see them falling off between the Mole and the ship—at least a 30 ft. drop—and being crushed by the ship against the wall. But not a man fell; their agility was wonderful. It was not a case of seamen running barefoot along the deck of a rolling ship; the men were

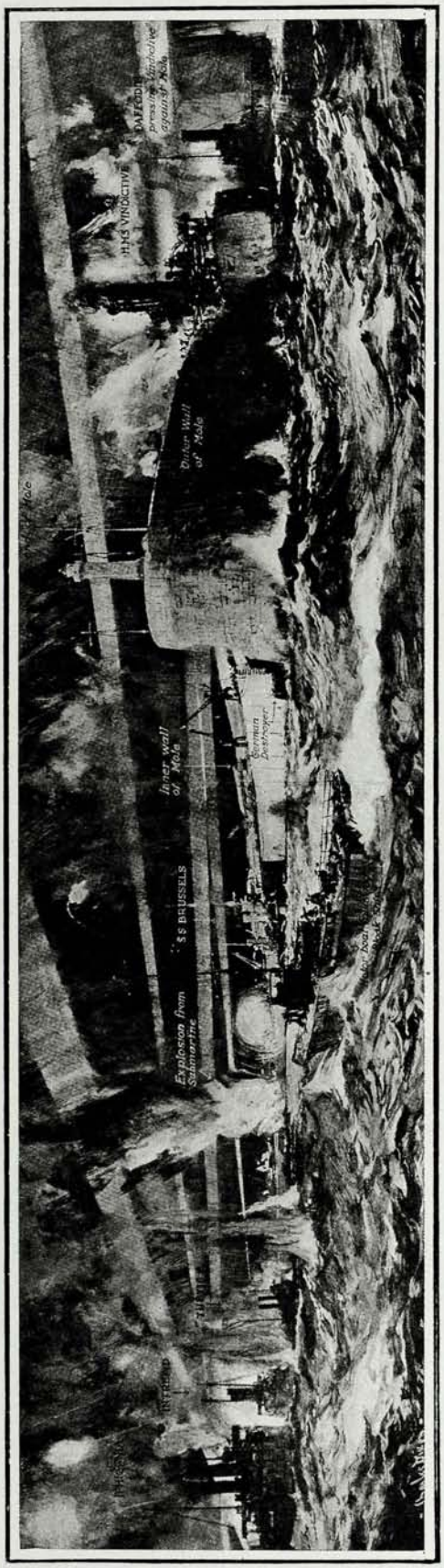


THE VINDICTIVE'S LANDING BROWS.

carrying heavy accoutrements, bombs, Lewis guns, and other articles, and their path lay along a narrow and extremely unsteady plank. They never hesitated. They went along the brows and on to the Mole with the utmost possible speed. Within a few minutes three to four hundred had been landed, and under cover of a barrage put down on the Mole by Stokes guns and howitzer fire from the ship they fought their way along.

"Comparatively few of the German guns were able to hit the hull of the ship, as it was behind the protection of the wall. Safety, in fact, depended on how near you could get to the enemy guns instead of how far away. While the hull was guarded the upper works of the ship—the funnels, masts, ventilators, and bridge—were showing above the wall, and on these a large number of German guns appeared to be concentrated. Many of our casualties were caused by splinters coming down from the upper works. If it had not been for the Daffodil continuing to push the ship in towards the wall throughout the operation none of the men who went on the Mole would ever have got back again.

"About 25 minutes after the Vindictive got alongside, the block ships were seen rounding the lighthouse, and heading for the canal



GENERAL VIEW OF THE ATTACK ON ZEEBRUGGE.

entrance. It was then realized on board the Iris, Daffodil, and Vindictive that their work had been accomplished. A quarter of an hour after the Vindictive took her position, and just before the blockers arrived, a tremendous explosion was seen at the shore end of the Mole. We then knew that our submarine had managed to get herself in between the piles of the viaduct connecting the Mole with the shore and had blown herself up. She carried several tons of high explosive, and the effect of her action was effectually to cut off the Mole from the land. Before the explosion the crew of the submarine, which comprised some half-dozen officers and men, got away in a very small motor-skiff, which lost its propeller and had to be pulled with paddles against a heavy tide and under machine-gun fire from a range which could be reckoned only in feet. Most of the crew were wounded, but the tiny boat was picked up by a steam pinnace.

"It is possible that the Germans who saw the submarine coming in under the play of their searchlights thought that her object was to attack the vessels within the Mole, and that she thought it feasible to get through the viaduct to do this. Their neglect to stop the submarine as she approached could only be put down to the fact that they knew she could not get through owing to the large amount of interlacing between the piles, and that they really believed they were catching her. A large number of Germans were actually on the viaduct a few feet above the submarine, and were firing at her with machine-guns. I think it can safely be said that every one of those Germans went up with the viaduct. The cheer raised by my men in the Vindictive when they saw the terrific explosion was one of the finest things I ever heard. Many of the men were severely wounded—some had three and even four wounds—but they had no thought except for the success of the operation.

"The block ships came under very heavy fire immediately they rounded the end of the Mole. Most of the fire, it appears, was concentrated on the leading ship, the Thetis. She ran ashore off the entrance to the canal on the edge of the channel, and was sunk as approximately as possible across the channel itself, thus forming an obstruction to the passage of the German vessels. Before going down she gave a signal to the other two block ships, which were following close behind, to inform them which side of her to pass in order

to get to the canal entrance. This cooperation between the three block ships, carried out under extremely heavy fire, was one of the finest things of the operation. The second and third ships, the Intrepid and Iphigenia, both went straight through the canal entrance until they actually reached a point some two to three hundred yards inside the shore lines, and behind some of the German batteries. It really seems very wonderful. How the crews of the two ships ever got away is almost beyond imagination

short time the ships were clear of imminent danger owing to the large amount of smoke which they had left behind them."

When the Vindictive ran alongside the Mole the landing parties were ready to swarm across the brows, but the hail of shrapnel and machine-gun fire took heavy toll of the stormers. Lieutenant-Colonel B. N. Elliot, D.S.O., R.M.L.I., Major A. A. Cordner, of the Marines, and Captain H. C. Halahan, D.S.O., R.N., were killed in the ship almost immediately. Lieutenant C. E. V. Hawkings, R.N., and

[*French official photograph.*

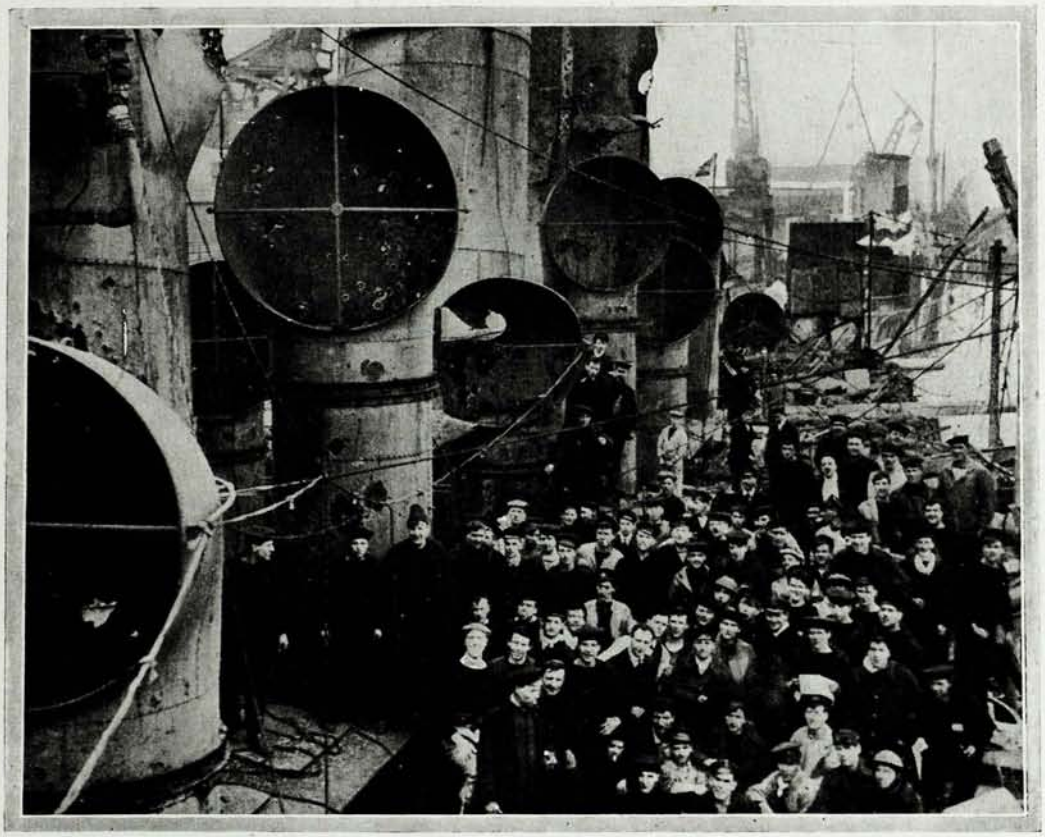
THE "SLIGHT DAMAGE" (AS REPORTED BY THE GERMANS) TO THE MOLE AND VIADUCT AT ZEEBRUGGE.

"The situation rather more than an hour after the Vindictive got alongside was this: The block ships had passed in, had come to the end of their run, and had done their work. The viaduct was blown up and the Mole had been stormed. Nothing but a useless sacrifice of life could have followed if the three boarding vessels had remained by the Mole any longer. The signal to withdraw was therefore given, and the ships got away under cover of their smoke-screens as quickly as they could. They went at full speed and were followed all the way along their course by salvos from the German guns. Shells seemed to fall all round the ships without actually hitting them. The gunners apparently had our speed but not our range, and with remarkable regularity the salvos plopped into the sea behind us. In a

Lieutenant-Commander G. N. Bradford, R.N., who carried the grappling anchors ashore from the Iris, were also killed. But led by Lieutenant-Commanders A. L. Harrison and B. F. Adams, R.N., and Lieutenants C. C. Dickinson and E. L. Berthon, D.S.C., R.N., and Major B. G. Weller, D.S.C., Captain E. Bamford, Lieutenants C. R. W. Lamplough and G. Underhill, of the Royal Marines, the bluejackets and marines rushed across the gangways with undaunted gallantry and fought their way splendidly into the German defences. In a rush for a machine-gun battery Lieutenant-Commander A. L. Harrison, R.N., was killed, and at the light-house Lieutenant-Colonel F. A. Brock, R.A.F. (Wing-Commander, R.N.), lost his life. This talented officer was the inventor of the smoke-screen, which, as Sir Eric Geddes admitted,

alone made the undertaking possible. Exposed to terrific fire, there was great loss of life in the Iris, Commander V. F. Gibbs, R.N., in command of the vessel, and her navigator, Lieutenant G. Spencer, D.S.C., R.N.R., both died of their wounds. Major C. E. C. Eagles, D.S.O., and Lieutenant S. H. E. Inskip, of the Royal Marines, were also killed, and many others, but the work was carried out in perfect order and many deeds of heroism were performed in its execution. The crew of the Thetis after she blew up were rescued by a motor launch under the command of Lieutenant H. A. Littleton, R.N.V.R., that of the Intrepid by another motor launch under Lieutenant P. T. Dean, R.N.V.R., and that of the Iphigenia by the same motor launch, the survivors being eventually transferred to a destroyer. The only material loss of any importance was the North Star, destroyer, sunk by gunfire, most of the crew being picked up by the Phœbe under cover of a smoke-screen.

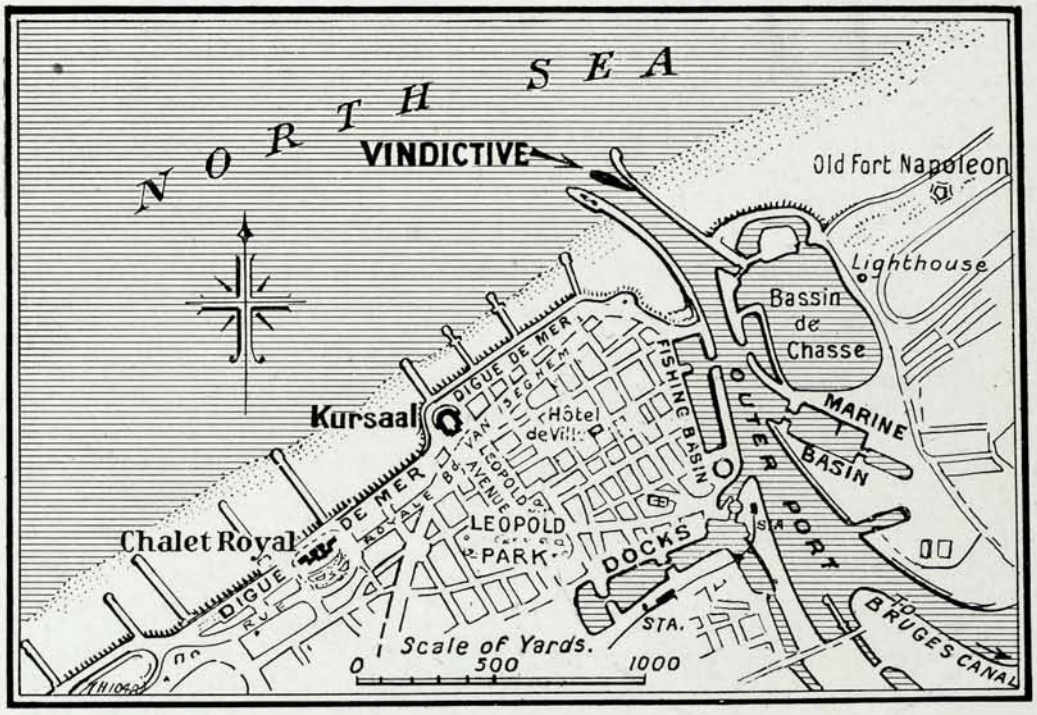
At Ostend the operations were conducted by Commodore Hubert Lynes, R.N., and there a change of wind brought about a less satisfactory result than was achieved at Zeebrugge. The flares lit by motor launches became visible to the enemy and were extinguished by gun fire. As these flares were intended to show the ends of the wooden piers leading to the harbour, their absence threw the blocking ships out of their course and they were run aground and blown up outside the entrance. The crews of the ships were rescued as fearlessly as were those at Zeebrugge, by motor launches commanded by Lieutenants K. R. Hoare, D.S.C., R.N.V.R., and R. Bourke, R.N.V.R. The



THE VINDICTIVE'S CREW ON THEIR RETURN FROM ZEEBRUGGE.

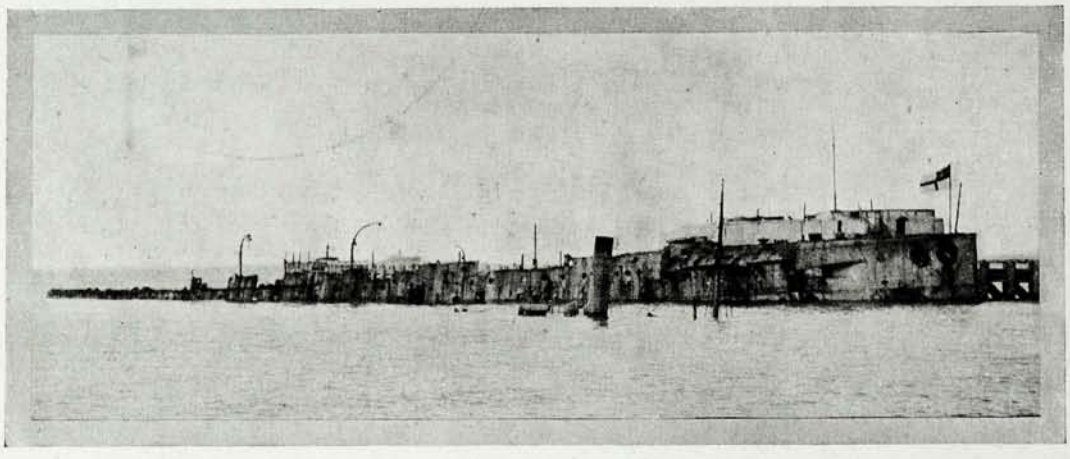
total casualties suffered in the dual enterprise amounted to 588 officers and men. Of these there were 21 officers killed and missing and 29 wounded, and 184 other ratings killed and missing and 354 wounded.

The British Navy was not a force to leave its work unfinished, and a further expedition was planned to complete the job at Ostend. The Vindictive was still seaworthy although badly battered, and she was prepared for the venture. Loaded with concrete and explosives she set out again on May 9 with Commodore H. Lynes as before in command of the new enterprise. Sir Roger Keyes, who had been made a K.C.B. for the earlier achievement, was again present in the Warwick. Commander A. E. Godsal,



PLAN OF OSTEND HARBOUR.
Showing the position of Vindictive.

R.N., who had taken the Brilliant in, was in command of the block-ship, and Engineer Lieutenant-Commander W. A. Bury, R.N., who had taken the Vindictive into Zeebrugge on St. George's Day, remained in charge of the machinery with his assistants and some volunteers. The Germans were again surprised, and on this occasion a fortunate breeze blew away the fog that hid the entrance between the two piers and enabled the ship to steer for the opening. She was helped by a coastal motor-boat under Lieutenant W. R. Slayter, R.N., which burned a flare on the spot from which the Stroom Back buoy had been removed by the enemy. Two motor-boats under Lieutenants A. L. Poland, R.N., and A. Dayrell-Reed, D.S.O., R.N.R., went ahead and torpedoed the pier ends while the monitors and seaplanes bombarded the batteries on shore. The Germans replied with every gun that would bear, and under a hail of projectiles the Vindictive steamed full speed for the entrance, where another motor-boat commanded by Lieutenant G. L. Cockburn, R.N., had laid



THE VINDICTIVE IN THE POSITION ALONGSIDE THE PIER AT OSTEND
To which the Germans had removed her.

a burning light buoy. The official narrative says, then :

The guns found her at once. The after control was demolished by a shell which killed all its occupants, including Sub-Lieutenant Angus H. MacLachlan, who was in command of it. Commander Godsal ordered his officers to go with him into the conning tower. The Vindictive laid her battered nose to the eastern pier and prepared to swing her 320 feet of length across the

COMMANDER A. E. GODSAL, R.N.
Took the Vindictive into Ostend Harbour and was killed.

channel. At that moment a shell from the shore batteries struck the conning-tower. Lieutenant Sir John Alleyne and Lieutenant V. A. C. Crutchley were still within. Lieutenant Alleyne was stunned by the shock : Lieutenant Crutchley shouted through the slit to the Commander, and, receiving no answer—for Commander Godsal had been blown to pieces by the bursting shell —rang the port engine full speed astern, to help in swinging the ship. She was lying at an angle of about 40 degrees to the pier, and seemed to be hard and fast. Lieutenant Crutchley therefore gave the order to clear the engine-room and abandon ship. Engineer Lieutenant-Commander Bury, who was the last man to leave the engine-room, blew the main charges by the switch installed aft. Lieutenant Crutchley blew the auxiliary charges in the forward 6-inch magazine. The old ship sank about six feet and lay upon the bottom of the channel. Her work was done. . . .

The losses were comparatively light, and most of these were incurred by the Vindictive's crew when leaving the ship. In the whole operation four officers and six men were killed, five officers and 26 men wounded, and nine men missing. The survivors were taken off in a motor launch by Lieutenants R. Bourke and G. H. Drummond, R.N.V.R. The only casualty in material was the launch commanded by the latter officer, who was himself severely wounded with several of his men, while his second in command, Lieutenant Gordon Ross, R.N.V.R., and one man was killed. The badly damaged boat was sunk after the wounded had been transferred to the Warwick.

It was not claimed that the channels at Zeebrugge and Ostend were completely sealed, but for all practical purposes, as centres of torpedo craft activity, the two ports were immobilized and Bruges was deprived of its value as a torpedo base

Reference was made in an earlier chapter (CCXII., page 169) to the extensive mining undertaken by the British Navy for the purpose of limiting the channels of access to the North Sea and the Outer Oceans available for the U boats. An account of the huge minefield laid down between the Shetlands and the coast of Norway appeared in an American paper, *Arms and the Man*, on November 9, 1918. Using a new type of submarine mine, the United States Navy was shown to have completed, in cooperation with the British Navy, an extensive "mine barrage" in the North Sea. Tentative plans for this were submitted to Admiral Benson, Chief of the Bureau of Naval Operations, on June 12, 1917; the development of a mine peculiarly adapted for use against submarines was announced on July 18, and plans were submitted on the 30th of that month for a British-

LIEUT. V. A. C. CRUTCHLEY, V.C.*
Took control of the Vindictive after Commander Godsal had been killed.

American joint offensive operation. These were submitted to the Admiralty through Admiral Mayo during his visit in August and September, and were accepted, in modified form. When Admiral Mayo returned, the

* The portrait given in Vol. XVII, p. 421, is that of Commander Osborne, R.N., not Lieut. Crutchley, as there stated.

U.S. Bureau of Ordnance was directed to proceed with the supply of the necessary mines, numbering many thousands. The work was divided among 140 principal contractors and more than 400 sub-contractors, the major portion being done by automobile manufacturers. Simultaneously, ships were converted into mine-layers, a mine-charging plant with a capacity of 1,000 mines a day was erected to load the mines, and other arrangements made, including the taking up of 20 merchantmen for the sole purpose of transporting mine material overseas. Material was first transported from America in February, 1918. A constant succession of ships was maintained in the following months, and only one vessel carrying mine material was sunk by submarine. In April, 1918, Rear-Admiral Strauss was appointed commander of the Mining Force, and the mine-layers, under Captain R. R. Belknap, reached their bases on May 26, 1918. In conjunction with the British forces, these American ships sowed vast areas with mines, making these tracts impracticable for the U boats. Exactly how many such engines were "planted" by the Allies in the North Sea was not disclosed, but it may be noted that on the cessation of hostilities every one of these machines needed to be swept up again, so that the mine-sweepers of the Navy, whose heroism and devotion to duty had been displayed so often and so conspicuously, were kept busy clearing the seas for safe traffic.

In addition to restricting the action of submarines by means of extensive minefields, there was a strengthening of the patrol both

THE RESCUE OF THE VINDICTIVE'S CREW AT OSTEND.

along the German coast and at the entrance to the Baltic. Sir Eric Geddes told the House of Commons that the North Sea was swept day and night, from north to south and from east to west, by the British Navy. In one month alone, the distance steamed in home waters by battleships, cruisers, and destroyers amounted to 1,000,000 miles. Over 3,000 patrol boats, as well as other armed vessels, were engaged in this work of watching the exits to the German ports. In such circumstances conflicts were of frequent occurrence, so much so that, as the Admiralty stated officially when exposing a Berlin report on one occasion, while they did not interfere with the maintenance and efficiency of our patrol, they were not reported.

On March 28, 1918, there was one of these patrol incidents which was typical of the kind of guerilla warfare which went on daily at this time. In the course of a sweep of the Heligoland Bight, a division of British destroyers captured and sank three German armed outpost trawlers. Three officers and 69 men—the entire crews of the enemy vessels—were made prisoners, and there were no casualties on our side. This capture was made in a sweep at night, during misty weather, and

REAR-ADMIRAL HUGH RODMAN.
In command of U.S. Battleships in European waters.

in a heavy sea. The enemy were completely surprised, being discovered lying at anchor in line. The British commander detailed two of his destroyers to board each of the trawlers, which proved a matter of considerable difficulty in view of the nature of the sea. As the British destroyers approached the centre trawler the latter's commander and crew abandoned their vessel, which blew up immediately afterwards as the result of explosion of bombs on board. The two other trawlers

ADMIRAL BENSON.
Chief of the U.S. Bureau of Naval Operations.

surrendered without resistance. The sea preventing the boarding party from getting on to one of the trawlers, the captain was ordered to weigh anchor and steer a certain course, which he did with some alacrity, spurred on by one of our destroyers. The weather becoming worse, the commander of the destroyers decided to take off the crews of the trawlers, which, notwithstanding the dangerous nature of the task owing to the high seas which were running, was carried out successfully by boats' crews. Later it was decided to sink the captured vessels, one being blown up by a demolition charge, and the other sunk with a few rounds of shot. The German prisoners seemed exceedingly pleased at being captured, one of them remarking that he expected to get some real food when he reached England.

A Prize Court action which arose out of this scrap was heard on July 30, 1918, when it was shown that the British destroyers engaged were the Abdiel, Legion, Telemachus, Vanquisher, Ariel, and Ferret, under the command of Captain Berwick Curtis, D.S.O., of the Abdiel. Captain Curtis stated in an affidavit that the German vessels, the Scharbeutz, Mars, and Polarstern, were each armed with a gun and further equipped with bombs, depth charges, and searchlights. For the 72 officers

and men on board the enemy craft, Sir Samuel Evans made an award of prize bounty to the British crews of £360.

Another small outpost affair occurred on April 20. Some small enemy forces were encountered by British light squadrons operating in the Heligoland Bight, and forced to retire behind their minefields. A few shots were exchanged at extreme range, and one enemy destroyer was observed to be hit. There were no British casualties.

Five days earlier there had been a more successful venture, so far as material results were concerned, in the Kattegat. The Commander-in-Chief, Grand Fleet, undertook a sweep there on April 15, and destroyed ten German trawlers, the crews of which were saved by the British ships, without any loss to our side. The locality was reported to be north-west of Kullen Island, at the northern entrance to the Sound. An indication was thereby afforded to the general public of the vast extent of sea which our vessels were watching and patrolling.

An interesting operation, significant because of aerial co-operation, took place off the coast of Schleswig-Holstein on July 19. This was an attack upon the Zeppelin sheds at Tondern. This lair was the objective of a previous bombing expedition—on March 25, 1916 (see Chapter CLIII., page 58)—when a seaplane force delivered the attack, supported from the sea by a light cruiser and destroyer force under Commodore (afterwards Rear-Admiral Sir) R. Y. Tyrwhitt. The official announcement issued on the night of July 20 was as follows:

A detachment of the Grand Fleet operating off the Jutland coast on the morning of Friday, July 19, has now returned to the base, having carried out a bombing attack on the Zeppelin sheds at Tondern, Schleswig, by R.N.A.F. machines despatched from the vessels.

In the first flight, which was made in the early morning, all machines reached their objective and made direct hits on a large double shed, which was completely destroyed, the conflagration rising to 1,000 feet. A second flight followed the first, all machines but one reaching their objective. A large shed was observed to have a hole of considerable dimensions in the roof, from which a volume of smoke was being emitted. A second shed was bombed, and direct hits were made, but owing to fierce anti-aircraft fire and to the smoke of the first shed it was not possible to observe whether destruction of the second shed was complete.

The attacks were made from a height of 700 to 1,000 feet.

Four of our machines failed to return and information has been received that three of these machines landed in Danish territory.

All ships returned without any casualties.

Later information obtained from one of the pilots in the raid showed that a bomb was dropped on a low, flat building, which was partially underground, situated a mile to the eastward of Tondern. From the nature of the building and the violence of the explosion which followed the dropping of the bomb, it was likely that this was a magazine. There were also reports to a similar effect in the Danish journals. The Germans were apparently surprised, for one airman was reported to have

FLEXIBLE VOICE PIPES.
For communicating orders from the bridge to the gunners.

stated that no barrage was put up: in fact, not a gun was fired at the aircraft, one of which was so low down that the pilot discerned in the main street of the town a farmer's cart from which the driver waved a friendly greeting. On his visit to the Fleet during the week following this raid, the King heard full particulars of the Tondern exploit, and three of the officers —Captains Dickson, Smart, and Bernard, R.A.F.—were decorated by his Majesty.

Another little affair in which aircraft working with the Navy were conspicuous took place on August 11, 1918. On this occasion, the sea and air forces carried out a reconnaissance of the West Frisian Coast. The British were heavily attacked by German aircraft, but were handled with admirable dexterity and courage

in the face of these odds against them. A feature of the operation was the work of the Coastal Motor Boats, under the command of Lieutenant-Commander A. L. H. D. Coke, R.N. Although greatly outnumbered by the aircraft which attacked them, these little craft succeeded in bringing down two enemy air machines. The severe nature of the fighting was shown by the fact that six of the motor boats failed to return. With this exception, the British forces engaged suffered no damage or casualties. Commander Coke was awarded the D.S.O. in the *London Gazette* of November 29 for his gallantry, the official announcement stating that this officer "showed great determination, gallantry, and courage in continuing his reconnaissance in spite of the presence of the enemy. The Coastal Motor Boats led by Lieutenant-Commander Coke fought a very gallant action against superior odds, and continued to do so until all their ammunition was expended or their Lewis guns rendered useless by jamming." Three other officers received the D.S.C. for their exceptional work on this occasion. The Germans admitted the loss of an airship (Commander Proells) and one aeroplane.

The Coastal Motor Boats (or C.M.B.'s) proved a useful and valuable addition to the Navy's auxiliaries. So, too, did the "P"-boats and the Yacht Patrol, which had many notable successes to their credit. The stirring fight of the yacht Lorna (No. 024), Lieutenant C. L. Tottenham, R.N.R., with a U-boat off Portland Bill has been related by Sir Henry Newbolt. U.B. 74, as this submarine was numbered, under the command of Ober-Leutnant Schtiendorf, was destroyed by ramming and depth charges on May 26, 1918, while in the act of attacking a couple of merchantmen, and so decisive was the result that only one German prisoner was picked up, and he died from his injuries within three hours.

During 1918 there were no successful attempts to put a German commerce raider on to the ocean trade routes. The return of the raider Wolf in February, 1918, however, from a cruise of fifteen months' duration, created some interest. This event was announced in the following German official *communiqué* dated February 24:—

The auxiliary cruiser Wolf has returned home after a 15 months' cruise in the Atlantic, Indian, and Pacific Oceans. The Kaiser has sent a telegram of welcome to the commander of the Wolf and has conferred on him the order *Pour le Mérite*. A number of Iron Crosses have also been conferred on officers and crew.

The cruiser, which was commanded by Captain Nerger, inflicted the greatest damage on the enemy's shipping by the destruction of cargo space and cargo. She brought home more than 400 members of crews of sunken ships, including numerous coloured and white British soldiers. Besides several guns captured from armed steamers, the Wolf brought great quantities of valuable raw materials, such as rubber, copper, brass, zinc, cocoa beans, copra, and so forth to the value of many millions of marks.

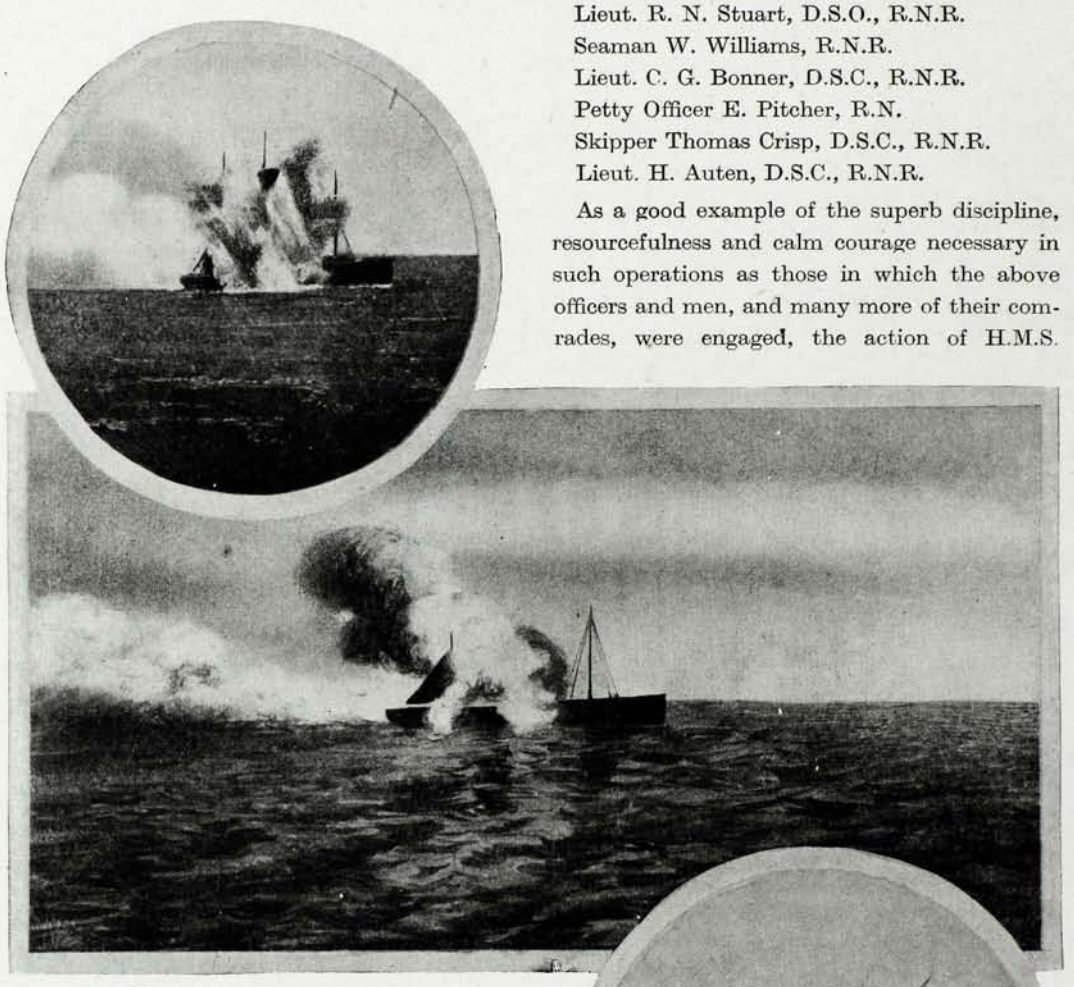
The British cruiser Turritella, which was captured by the Wolf in February 1917, was equipped as a second auxiliary cruiser and christened the Iltis, and successfully operated in the Gulf of Aden under the command of the Wolf's first officer, Lieutenant-Captain Brandes, until she was confronted by British forces, when she was sunk by her own crew, who, to the number of 27, are prisoners in British hands.

This cruise was carried out in the most difficult circumstances, with no base and no means of communication with home, and constitutes a unique achievement.

In view of the foregoing the British Admiralty announced that it was to be presumed that 11 merchantmen—six British, three U.S.A., one Japanese and one Spanish—which had long been posted as missing, had been destroyed by the Wolf in the Indian and Pacific Oceans and their crews made prisoners. Of these vessels, the Turritella was of 5,528 tons gross. In a speech at Lübeck, Commander Witschewsky, described as first officer of the Wolf, said that she went out to sea *via* Iceland, and then round the Cape and into the Indian Ocean, passing close to Madagascar. In the Indian Ocean, a south-easterly course was taken for safety, and after passing round Australia, New Guinea and New Zealand, the Wolf proceeded to Bombay, Ceylon, the Indian coast, and the Red Sea, then to the south, round the Cape, and through the Atlantic back to Iceland, whence the ship went home along the Norwegian coast. This officer said that the first object of the cruise was mine-laying, and these machines were strewn off the Cape and about Colombo at night-time by the aid of English searchlights. One officer who was a prisoner on board her stated that she carried seven 6-inch guns, four torpedo tubes, a seaplane called the Wölfchen, bombs, hand grenades, etc. She could raise and lower her masts, and probably do the same to her funnel. A dummy funnel and false mast could also be rigged on the poop. The cruise of the Wolf certainly brought back a touch of romance, at times reminiscent of Marryat, into the story of the sea war. Captain Nerger was acclaimed as a national hero throughout Germany, and within a day or two of his return was said to have received several

hundreds of proposals of marriage by telegraph from German women.

When, in an earlier chapter,* the various means and methods for dealing with the enemy



GERMAN ARMED TRAWLERS SUNK IN THE KATTEGAT BY BRITISH SHIPS.

submarines were described, it was only possible to mention the "Q" boats or "mystery ships." These vessels were described as follows by Sir Eric Geddes :—

> "Q" ships are decoys. They may be old sailing ships lumping along in a choppy sea, obviously unarmed and an easy prey to the submarine. The ships are manned by volunteers—the very best and the very bravest that our sea service can produce—and the ships are veritable quick-change artists. In half a dozen seconds or so they are converted from apparently harmless traders to formidable men-of-war.

In a special supplement to the *London Gazette* on November 20, 1918, there appeared a series of examples of actions fought by the "Q" boats. The supplement contained the names of no less than eight officers and men who had been awarded the Victoria Cross for such service, viz. :—

Commander Gordon Campbell, D.S.O., R.N.
Acting Lieut. W E. Sanders, R.N.R.
Lieut. R. N. Stuart, D.S.O., R.N.R.
Seaman W. Williams, R.N.R.
Lieut. C. G. Bonner, D.S.C., R.N.R.
Petty Officer E. Pitcher, R.N.
Skipper Thomas Crisp, D.S.C., R.N.R.
Lieut. H. Auten, D.S.C., R.N.R.

As a good example of the superb discipline, resourcefulness and calm courage necessary in such operations as those in which the above officers and men, and many more of their comrades, were engaged, the action of H.M.S. Stock Force, on July 30, 1918, may be cited. This "Q" boat, commanded by Lieutenant Harold Auten, D.S.C., R.N.R., was torpedoed by an enemy submarine at 5 p.m. on that day. The torpedo struck the ship abreast No. 1 hatch, entirely wrecking the fore part of the ship, including the bridge, and wounding three ratings A shower of planks, unexploded

* Chapter CCLVII.

shells, hatches, and other debris followed the explosion, wounding the first lieutenant (Lieutenant E. J. Grey, R.N.R.) and the navigating officer (Lieutenant L. E. Workman, R.N.R.) and adding to the injuries of the foremost gun's crew and a number of other ratings The ship settled down forward, flooding the foremost magazine and between-decks to the depth of about three feet. A "panic party,"

PRISONERS FROM THE GERMAN TRAWLERS SUNK IN THE KATTEGAT.

in charge of Lieutenant Workman, R.N.R., immediately abandoned the ship, and the wounded were removed to the lower deck, where the surgeon (Surgeon Probationer G. E. Strahan, R.N.V.R.), working up to his waist in water, attended to their injuries. The captain, two gun crews, and the engine-room staff remained at their posts.

The submarine then came to the surface ahead of the ship half a mile distant, and remained there a quarter of an hour, apparently watching the ship for any doubtful movement. The "panic party" in the boat accordingly commenced to row back towards the ship in an endeavour to decoy the submarine within range of the hidden guns. The submarine followed, coming slowly down the port side of the Stock Force, about 300 yards away. Lieutenant Auten, however, withheld his fire until she was abeam, when both of his guns could bear. Fire was opened at 5.40 p.m.; the first shot carried away one of the periscopes, the second round hit the conning-tower, blowing it away, and throwing the occupant high into the air. The next round struck the submarine on the water-line, tearing her open and blowing out a number of the crew.

The enemy then subsided several feet into the water and her bows rose. She thus presented a large and immobile target, into which the Stock Force poured shell after shell until the submarine sank by the stern, leaving a quantity of debris on the water During the whole of the action one man (Officers' Steward 2nd Class R. J. Starling) remained pinned down under the foremost gun after the explosion of the torpedo, and remained there cheerfully and without complaint, although the ship was apparently sinking, until the end of the action.

The Stock Force was a vessel of 360 tons, and despite the severity of the shock sustained by the officers and men when she was torpedoed, and the fact that her bows were almost obliterated, she was kept afloat by the exertions of the ship's company until 9.25 p.m. She then sank with colours flying, and the officers and men were taken off by two torpedo-boats and a trawler.

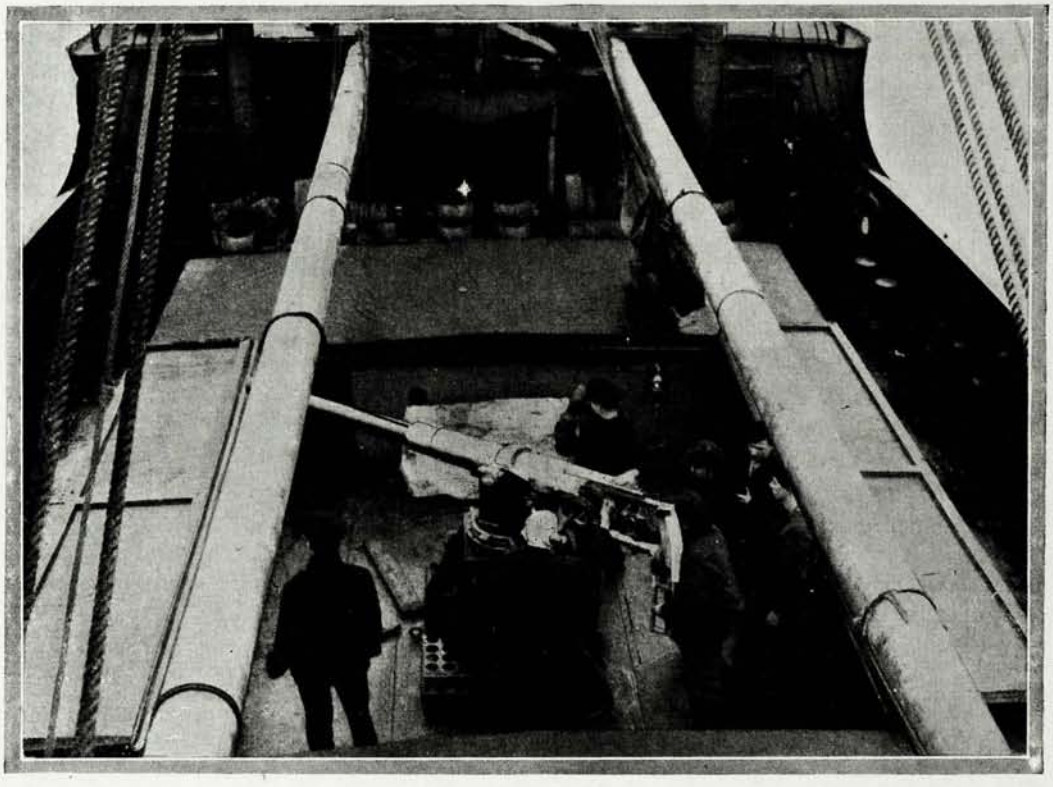
There are few more vivid and romantic stories in the record of the sea fighting of the Great War than those connected with "Q" boats. Officers and men vied with each other in designing allurements for the enemy. One man would don female attire over his uniform, and recline prominently on the poop in a deck chair; another would procure a stuffed parrot to fasten in a cage which he could take over the side as a member of the "panic party" to heighten the effect; and so on. After a while, however, it became more difficult to bait the Germans. The continued success of the "Q" boats was remarkable testimony to the iron nerve and unfailing resource of the British seaman. The submarine commander would not venture to the surface until after his torpedo had struck home; hence it resolved itself into a case of the "Q" boats going out with the deliberate intention of being torpedoed themselves, in order that, following such an attack, they might get a chance to destroy their assailant when he came above water to gloat over his supposed victim. In its original conception, the "Q" boat idea was adopted by several classes of war vessels,

from the time of the Baralong affair in 1915 Numerous were the trawlers which put out to sea with guns concealed in all sorts of ways. But the practice of trapping submarines grew and developed until, in the final phase, it was one of extreme ingenuity and daring. All honour to the splendid seamen who prosecuted this species of sea fighting with such conspicuous skill and relentless ardour.

During the year the Admiralty revealed the fact that the British submarines which had been operating in the Baltic since 1914–15 had been destroyed, and explained the reason for this step. It was on October 15, 1914, that two boats of the E type first entered the Baltic. Ten months later two more followed them; and two more still a month afterwards. All these boats proceeded by sea—through the Skaw and the Sound; but more remarkable in its way was the dispatch of four boats of the C type to Archangel in 1916, whence they were transported overland to Kronstadt.

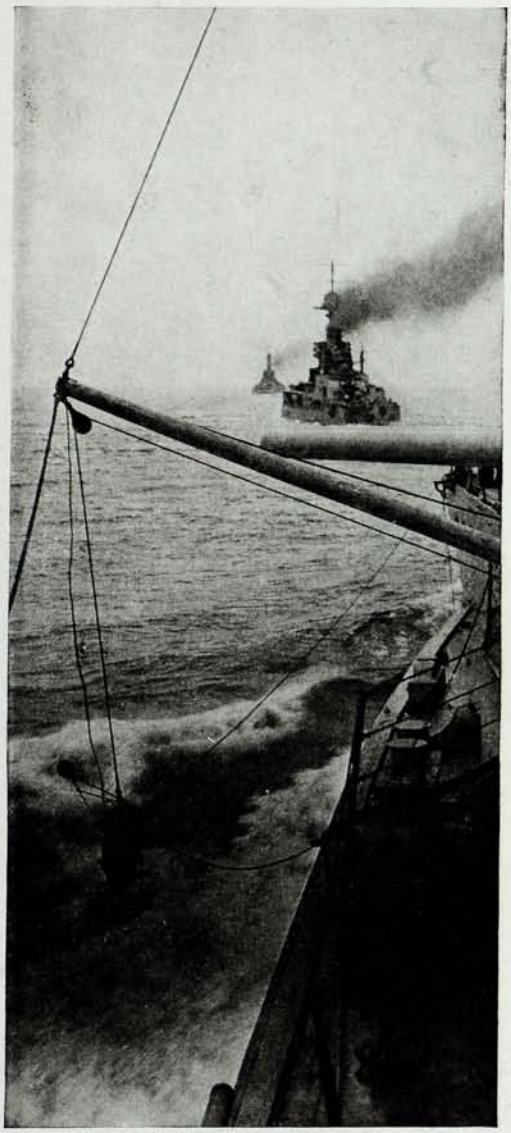
When the Germans approached the coast of South-West Finland, the seven British submarines remaining in Russian waters were destroyed between April 3 and 8, 1918, outside Helsingfors. Owing to the Russian disaffection this little submarine flotilla had come to be the only force which the Germans really feared in those parts. Its escape by the Sound being cut off, there was nothing left but to destroy the boats to prevent their falling into enemy hands. The flotilla was formerly commanded by Captain Cromie, R.N., who in January, 1918, was appointed Naval Attaché at Petrograd, and who was killed in the deplorable attack on the Embassy there by the Bolshevists on August 31, 1918. In a dispatch dated May 17, 1918, the Petrograd Correspondent of *The Times* wrote: "During the presence of our flotilla in the Baltic it succeeded in sinking one battleship, two cruisers, four destroyers, one aeroplane carrier, four transports, one collier, and 14 merchant vessels. This entailed not less than between 2,000 and 3,000 casualties to the enemy—that is to say, 10 times the numerical strength of the flotilla."

An Allied expedition to the Murman coast was undertaken in the summer of 1918. Early in July it was announced that British and French warships were in Murman ports, and that preparations were being made for assisting the local Russian authorities to maintain their independence. On August 8 a notice issued



GUN HIDDEN WITHIN THE FORWARD HATCH OF THE SUFFOLK COAST.
A replica of the Stock Force, moored in the Thames for public inspection.

by the Press Bureau stated that "Allied forces, naval and military, with the active concurrence of the Russian population, landed at Archangel on Friday, August 2. Their arrival was greeted with general enthusiasm by the inhabitants." It was also stated that the object of the expedition was to prevent Germany from establishing on the Russian coast bases for the supply of her submarines; to keep open the road of communication between

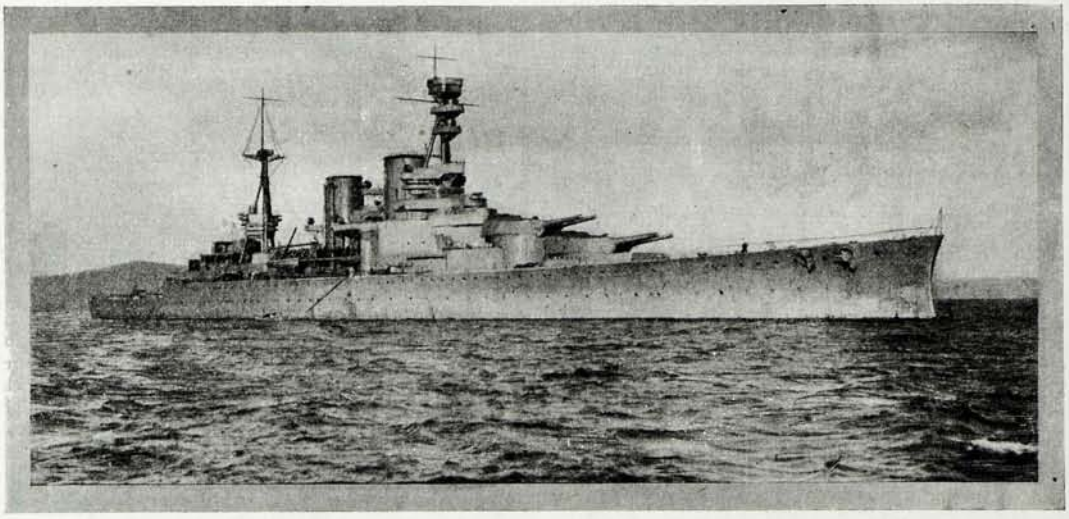


LAUNCHING A PARAVANE.
The apparatus which protects ships from mines.

Russia and the West; and to save the remainder of the war material that the Allied ships took there for the use of the Russian Army. On September 12 the presence of American troops was disclosed. On September 16-17 a successful operation was carried out by naval and military forces on the River Dvina, which resulted in the sinking of two enemy ships, the capture of three guns, and the infliction of heavy loss. Further fighting both on the Archangel and Murmansk fronts was revealed officially on October 6.

It was not until certain honours for service on the Murman coast were conferred in the *London Gazette* on December 12, 1918, that the identity of some of the British warships engaged there was made known. It was then stated that Modyugski Island, at the sea end of the channels leading to Archangel, was captured on August 1, 1918, after the batteries had been silenced by the Allied warships, and the town of Archangel was occupied next day, the Bolshevik forces being quickly and efficiently overcome and driven out of the vicinity. "Following these operations," said the *London Gazette*, "a River Expeditionary Force was organized with local craft, armed and manned by Allied crews, and this expedition succeeded, in co-operation with the military forces, in clearing the River Dvina and the River Vaga of hostile craft up to the time when Allied ships had to be withdrawn to avoid the ice, several of the principal enemy vessels being destroyed." The honours conferred included some to officers serving in the light cruiser Attentive, the monitor M.25, and the gunboats Razlyff, Advokat, and Gorodok. In addition to the gunboat squadron and the motor launches, a paddle mine-sweeping squadron was also mentioned.

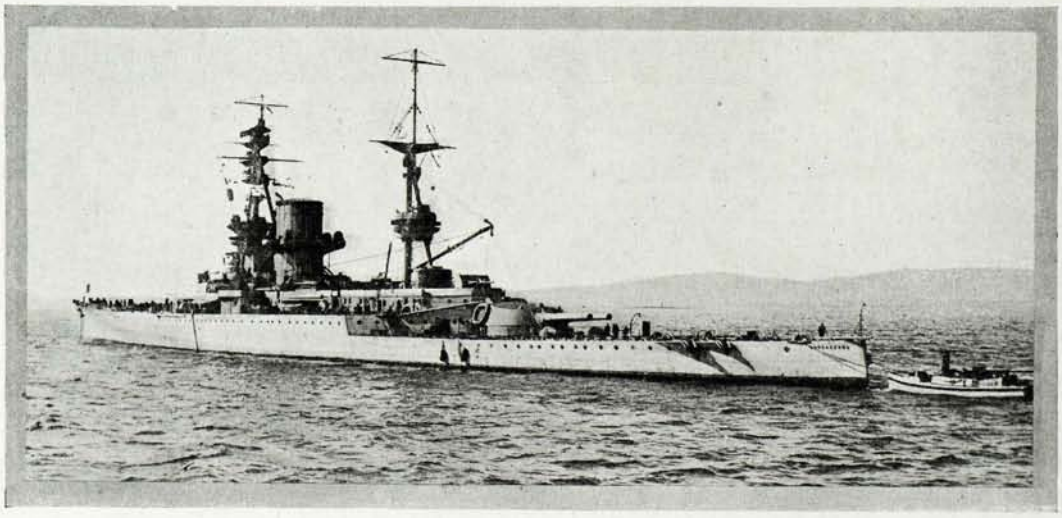
A startling episode in the first month of the year 1918 in the Mediterranean theatre of war was the sortie of the Goeben and Breslau from the Dardanelles. For the first time since these notorious Turco-German warships fled to the Straits in the first month of the war, they emerged therefrom on January 20, 1918. To the north of Imbros, the British monitors Raglan and M.28 were attacked while at anchor, and after being struck by heavy salvoes sank before they could fire a shot in their own defence. Altering course to the southward, the enemy made off at high speed, being shadowed by the destroyers Tigress and Lizard, which had made a plucky effort to cover the monitors by forming a smoke screen, in which attempt they were subjected to a heavy fire from the Goeben. Eventually, the Breslau, when about six miles south of Kephalo, struck a mine, a large explosion being observed



H.M.S. REPULSE—ONE OF THE SO-CALLED "HUSH" BATTLE CRUISERS.
The Renown is a sister ship.

abreast her after funnel. Three more explosions quickly followed, and within 10 minutes she sank by the stern, heeling over as she went down. Soon afterwards, four enemy destroyers were seen coming out of the Dardanelles, supported by an old Turkish cruiser, but on the Tigress and Lizard promptly engaging the destroyers they hurriedly retired up the Straits, the nearest one being repeatedly hit and set on fire. Meantime, the Goeben continued on her southerly course until an attack by aircraft forced her to alter course and head for the Dardanelles. In the act of turning, however, she also struck a mine, and settled down aft with a decided list. She was able to regain the shelter of the Straits, in spite of repeated attacks from the Allied aircraft, which obtained two direct hits when off Chanak. She was headed for the shore and beached at the extreme end of Nagara Point. For a week the battle-cruiser remained aground, during which time she was repeatedly bombed from the air, but the bad weather hampered the aerial operations considerably, and a reconnaissance carried out about midnight on January 27 revealed the fact that the vessel had been successfully refloated. Ultimately, of course, in common with other enemy warships in the Black Sea, the Goeben fell into British hands in November, 1918.

A gallant episode, which did not have the successful termination which it deserved, was the cruise of submarine E.14 up the Straits on the night of January 27 with instructions



H.M.S. COURAGEOUS.
Added to the Navy during the war. The Glorious is a sister ship.

to complete the Goeben's destruction. Under the command of Lieut.-Commander G. S. White, E.14 proceeded into the Dardanelles, but encountered considerable anti-submarine activity. According to the Turkish official account, off Kum Kale the boat was destroyed by gunfire. The other naval operations during what proved an eventful year were chiefly the work of the Allied navies in the Mediterranean, in which the British Fleet took an important share.

When, after hostilities had ceased, the British people came to review the progress of the four and a quarter years of war, the vital and fundamental nature of the work of their seamen stood more apparent than ever. It was the Navy which had made possible the triumph of the Allied cause. Speaking at Leeds on December 7, Mr. Lloyd George said that if Germany had succeeded in her submarine campaign the Allied cause would have been hopelessly lost. The Prime Minister added :—

> Then the submarine warfare, the submarine itself, was dealt with. The convoy system was set up for the first time, so as to make it difficult, and even impossible, for the submarine to attack our ships. That saved millions of tons, and thousands of gallant lives of our sailors. Then there were devices for destroying submarines. Gradually, month by month, we were chasing them with these new designs, pursuing them, hunting them through the deep, and you have no notion of the persistency, the skill, the daring, the endurance which have been put by the British sailor into the hunting of this wild animal. Hidden in the deep, night and day, sunshine and storm, up in the frozen waters of the north, in the torrid waters of the south, east, and west, ocean, gulf, strait, and sea, through the months day by day, hour by hour, without ceasing, hunting, chasing, pursuing, fighting, and destroying, until at last this pest was got completely under. Believe me, in the whole of their glorious history the British seamen have never been greater than in the last five years.

LIEUT.-COMMANDER F. H. SANDFORD, R.N.
Who was responsible for the rescue of the crew of the submarine which, commanded by his brother, was used to blow up the viaduct to the Mole at Zeebrugge.