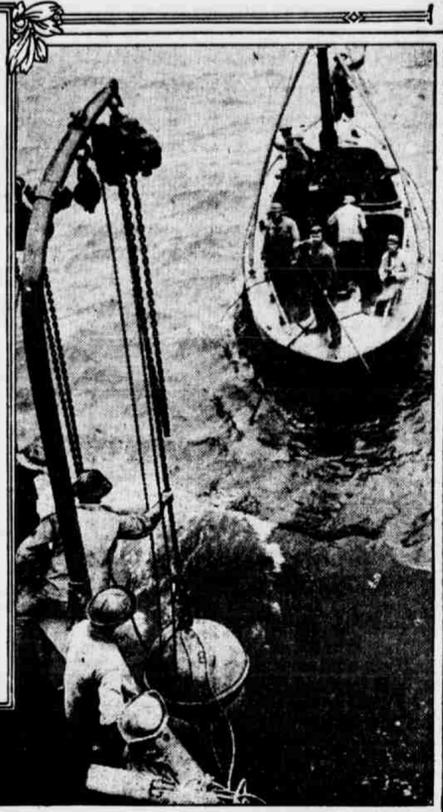


SWEEPING THE SEAS OF THE DEADLY MINE



HANDLING MINES FROM A SHIP'S CUTTER.



MINE PLANTING. © BY INTERNATIONAL FILM SERVICE.

Death's Harvest Did Not End With War and Daring Men Work Daily to Cut the Life Toll

By ROBERT G. SKERRETT.

THE sea has been sown with the seed of death and the harvesting of human lives has not come to an end. Day by day the gruesome toll grows. No one can tell when it will be complete.

The "dud," the unexploded shell, buried in the soil, will be a danger to the husbandman of Europe for a long time to come. The farmer bent upon restoring his war-wrecked acres to peaceful productivity, may be blown to bits, all because his plough has happened to hit a hidden projectile still charged with its destructive burden.

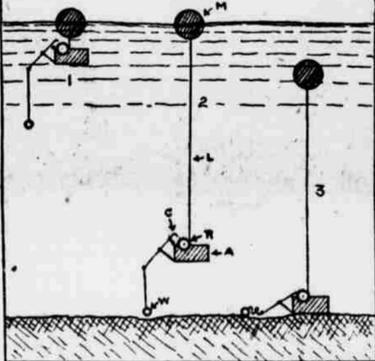
But this peril of lurking disaster, the aftermath of strife, is by no means limited to the land. The toilers of the deep are somewhat similarly menaced, for they have continually before them the fear of untold thousands of undetonated mines that were planted in navigable waters during the recent years of hostilities.

Weeks back the sting of the U-boat was drawn. Further ravaging of the submarine was halted, and shipping has sailed forth no longer in dread of the torpedo or the guns of underwater craft. Nevertheless ships have suffered from other subaqueous agencies of demolition since the signing of the armistice, and the worst of it all is that the mariner cannot be sure that these hazards won't lie within his path for months to come, and do him harm when and where least suspected.

Some Sinkings Recently. Early in December the British warship Cassinara struck a mine in the Baltic and sank with a loss of eleven of her men. On January 9 off Middeburgh, England, a British freighter hit a mine and foundered. Most of the crew were lost after they had managed to get away in the boats.

Five days later the French ship Chaudois struck a mine in the Straits of Messina and went to the bottom in four minutes. Four hundred and sixty of the people aboard were lost and many of the 230 survivors were injured by the explosion. The British steamer Penarth on February 5 was sunk by a mine twenty-three miles off the mouth of the river Tyne. On the same day a Norwegian steam fisherman and a Swedish freighter were destroyed in kindred fashion. The Norwegian craft went to her doom off the port of Stavanger and eight of her crew were killed outright. In the case of the Sphinx, the Swedish vessel, seventeen of her people were sacrificed. She sank off the north-east coast of England.

Three days previously the Danish steamer Carmen met a similar fate in the North Sea and only one of her crew survived. The British mine sweeper Edin's Isle while working off the mouth of the River Thames



HOW THE ANCHORED CONTACT MINE IS PLANTED. N91—JUST AFTER BEING CAST OVERBOARD. N92—ANCHORING GEAR APPROACHING BOTTOM AND THE WEIGHT W, TOUCHING SEABED AND LOCKING THE CABLE REEL, R. N93—ANCHOR, A, DRAWS MINE TO CHOSEN DEPTH.

bumped against a mine and paid the usual penalty. Twenty-eight of her crew were saved.

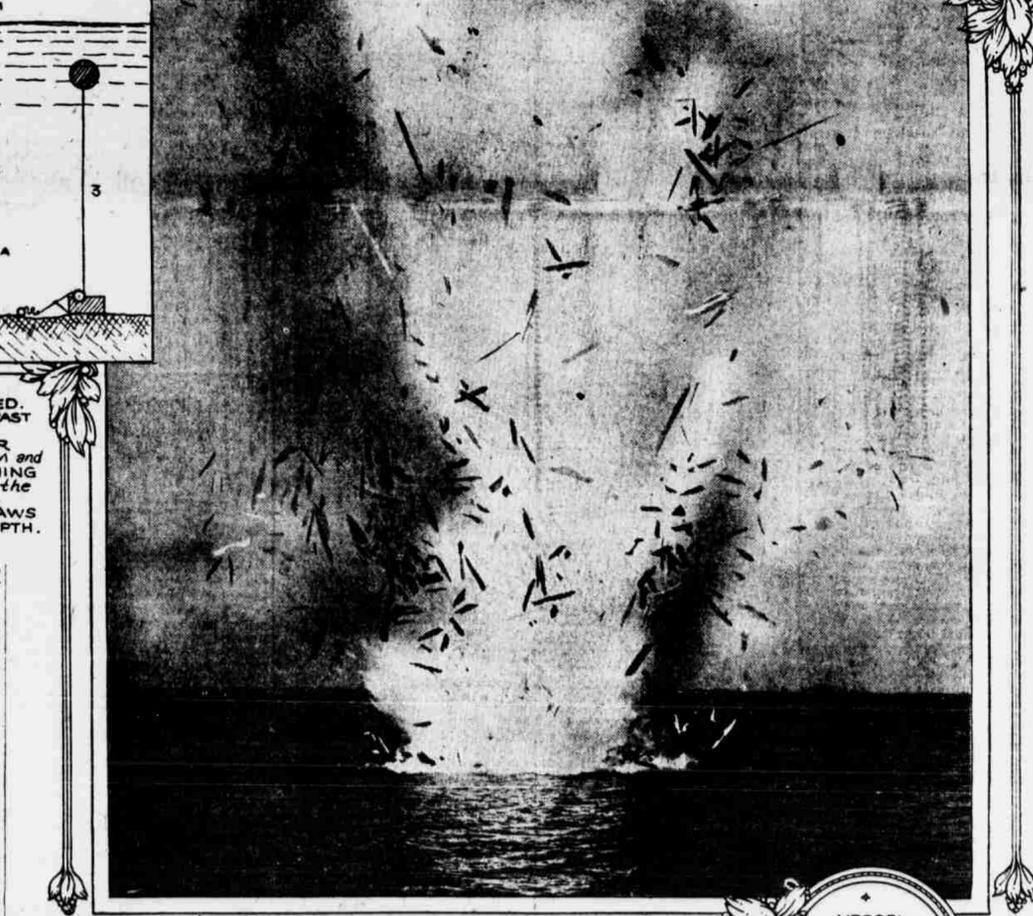
Recently a Scandinavian liner reaching New York reported that navigation in the North Sea and contiguous waters was very much impeded by the presence of drifting mines. Several times during the ship's westward run she came within a few feet of these dreaded derelicts, and to lessen the danger it was deemed best to anchor the steamer during night time off the Norwegian coast.

Much Anxiety by Shipping Men. This state of affairs, and the incomplete record of the toll so far levied by vagrant mines since the signing of the armistice are calculated to occasion a deal of anxiety in shipping circles. Experience in the past is a fairly reliable index of what may be ahead for the mariner, and peaceful shipping is likely to suffer gravely because of the means employed by the late belligerents to carry on their warfare beneath the sea.

The story of what happened both during and after the Russo-Japanese war is a fair example of what the indiscriminate planting of submarine mines in the open sea can lead to. The mine proved to be a two-edged weapon and worked havoc to friend and foe alike. But the matter of present interest is the damage wrought by floating mines among neutral and peaceful shipping months after the cessation of that war. These weapons drifted far and wide, even while their anchors still remained attached to their moorings, and time has failed to lessen their power to harm. Again, others broke away from their anchors and were carried by the winds and currents of the sea into the Gulf of Bechell and far up into the Gulf of Laotung.

Following the close of the war between Russia and Japan something like thirty vessels were either very seriously damaged or sunk outright by unexpected collision with floating mines; and during the period of conflict and for a considerable while thereafter Chinese junks were obliterated with appalling frequency.

This was especially the fate of native fishermen operating in the upper reaches of the Yellow Sea. One of these mines was discovered by the U. S. S. New Orleans right in the harbor of Chefoo, where it had been impelled by wind and tide far from its original place of planting. A Russian



VESSEL BLOWN UP BY A MINE.

steamship struck a mine off Vladivostok on October 21, 1906, a year after the war ended, and only sixty persons out of the 200 on board were saved.

According to available statistics, there were probably fewer than 5,000 mines planted by both belligerents during the Russo-Japanese war—a mere fraction of the mines that had been sown in European waters since August 1, 1914—and yet scores of craft of all kinds were sent to the bottom by these hidden and derelict dangers. It is true that both the belligerents engaged in sweeping operations and endeavored to clear the known mine fields, but unhappily many of these weapons were planted without records of their whereabouts surviving, and hundreds of others were sent broadcast by natural forces.

It was because of the havoc wrought by drifting mines that the Hague Convention of 1907 undertook to put some curb upon the new practice of sowing mines in the open seas and beyond the territorial waters of the Powers concerned. It was prescribed at The Hague that mines used within an area of hostilities should be of such a nature as not to expose innocent navigation to danger after hostilities were over or the area had been deserted by the belligerents.

The conference did not prescribe how this was to be accomplished; and it is a matter of fairly general knowl-

edge among those familiar with the art that the various maritime Powers have since 1907 sought to meet the obligation by means of different expedients.

One of the implied prerequisites to insure immunity to innocent shipping was that all anchored contact mines should be thoroughly well secured to their anchors in the first place, and then if they broke loose that they would immediately become harmless, either by sinking or by having their detonating mechanism automatically rendered inoperative. But strong currents and heavy storms repeatedly wrecked the mine fields despite the precautions adopted to hold the machines in place; and after nearly every sale the losses among shipping, due to wandering mines were noticeably larger.

Official figures issued by the Dutch and the Danish authorities are informative. At the close of the first two years of the war more than 500 mines had been beached upon the north coast of Jutland; and by March 1, 1918, 918 mines had been washed up on the shores of Holland. Of these 484 were indisputably British, fifty-eight were French, and 175 of them were certainly of German origin. There was no distinguishing mark on 261; but inasmuch as the French and British uniformly marked theirs, the natural assumption was that the Ger-

mans were responsible for the so-called unknown.

Just how these unsecured mines increased in number as time passed has been disclosed by later figures from Holland. From 1914 to September, 1918, the Dutch picked up along the short seacoast of the Netherlands no fewer than 5,050 contact mines, and four-fifths of these roaming menaces were identified as being of British origin.

The belligerents were not the only European nations that employed mines. The Dutch, the Danes, the Norwegians and the Swedes all planted defensive mine fields, and upon numerous occasions these weapons got adrift and added to the perils of shipping. In the latter months of the war derelict mines were reported almost daily by the Scandinavian papers, and every effort was made to give warnings of their whereabouts. Even so, vessels frequently ran aground of them. The worst danger lay in those mines which had torn away from their moorings and were swept along just below the surface by tidal currents. It has been estimated by the Swedes that quite 25 per cent of their shipping loss was due to submarine mines.

It is commonly believed that the mine when loose from its anchor is no longer a source of danger. Theoretically such is the case, but there is a disheartening gap between

the purpose of the fabricator and the actual performance of the detonating apparatus tucked away in the vitals of the weapon. It is not the object of this article to detail the various ways in which the several maritime Powers have sought to render harmless their anchored automatic contact mines after they break away from their moorings. The point is that mechanisms have failed to function as designed—sometimes because of some trifling defect in manufacture, again owing to physical changes wrought by exposure to the elements or the action of the sea water after a more or less protracted submergence.

The Netherlands Government found it necessary a few months after the outbreak of hostilities to organize a special force for dealing with mines that were coming ashore along the coast of Holland, and the work proved to have all of the thrills of actual warfare.

The mines that gave the greatest trouble were those of British origin. It was, of course, ticklish and to a degree dangerous to dispose of either the French or the German mines, yet their structural get-up facilitated opening them and extracting their

detonators and explosive charges without disaster. The British mines, on the other hand, could not be dealt with in the same confident fashion, and it was almost invariably found necessary to explode them from a distance, either by gunfire or by a detonating charge set off externally. English, French and German mines had always to be handled cautiously lest a sudden sharp blow should do the business.

Despite the most rigid and continual patrolling, drifting mines came ashore in numerous instances and promptly exploded when they bumped against the beach or pounded upon a rock in shallow water. Two cases will suffice to illustrate what must be guarded against from now on for months. A floating mine was washed up on the coast of Italy near Fossacesia, where it promptly exploded and did serious damage to a railway running close by.

Wrecked Property on Beach. Again, a derelict mine was swept ashore near Flushing, Holland, and detonated by that contact. As a result of the blast windows in neighboring hotels and houses were smashed and other harm done to property in the vicinity. Fortunately no one was hurt. In the majority of cases mines have broken adrift from their anchors by the parting of their cables, indicating that these wire ropes have been frayed by the continual movement of the mine induced by either tidal currents or the surge of storm waves.

At the very start of the war it was announced that each Power concerned promised to remove all mines that could be located at the close of hostilities, and assurance was given that this would be done with the least possible delay by each Government, especially within the areas of their own mined waters. As the struggle went on the mine fields were not only multiplied but the extent of some of them was increased tremendously.

Further, the Germans especially, through the agencies of mine planting submarines and surface mine planters many thousands of these dire weapons indiscriminately in the paths of enemy shipping and persistently at the mouths of rivers or other approaches to the harbors of their foes. To offset this menace the British Government created a special mine sweeping flotilla, manned for the greater part by Britain's sturdy fishermen. For this service they drew upon no fewer than 700 craft to do the work around the British Isles alone. Each month, so it is reported, the mine sweepers have combed fully 460,000 square miles of the seas, and to accomplish this they have steamed a total of 1,132,000 miles. And what have these fearless seafarers accomplished in their several years of extra hazardous employment? During 1916 they removed 21,000 mines planted by the Germans and they lost in that service fifty-one of the sweeper vessels, not to mention the lives of many of the men aboard. In 1917 43,000 mines were garnered by the sweepers and eighty-nine of the flotilla were destroyed the while. In 1918, up to October 1, 14,000 mines were har-

vested, and during those nine months nineteen sweepers went to the bottom. It has not sufficed for the British mine sweepers to operate in home waters. German raiders sowed their seeds of death far and wide. The notorious raider Wolf scattered these menaces at various places between South Africa and the Orient. Not only that, but she captured the steamer Turritella and outfitted her as an auxiliary minesweeper. It is a matter of record that the British found it necessary to sweep up mines laid off the Cape of Good Hope, in the Gulf of Aden and about Ceylon, while vessels more than once have stumbled upon mines, undoubtedly of German origin, planted in the waters contiguous to New Zealand.

We have had our own taste of Teuton mine planting activities here within the domestic waters. The cruiser San Diego was sent to her grave by a German mine right off Long Island; the battleship Minnesota was damaged off the Delaware coast. The Malloy liner San Saba, early last October, struck a floating mine about fifteen miles southeast of Barnegat, and the steamship Pratt was gravely injured by a mine near the entrance to the Delaware, but grounded before foundering. It is true that our coastal patrol craft swept up some of the mines planted by the Teuton U-boats that operated off the Atlantic seaboard, but we cannot be sure that all of these lurking perils were removed, and the worst of it is these subaqueous scourges may turn up almost anywhere in our navigable waters.

Planted Many Thousands. And now we come to shipping's greatest source of danger from submarine mines. The British established a mine barrage on the North Sea, side of the Strait of Dover and planted a pretty extensive mine field off the German, the Holland and the Danish coasts in the earlier period of the war, but in 1917 this restrictive barrier was very much amplified until it reached farther westward and extended northward to the Skager Rack. Within the limits mentioned, the British navy planted thousands and thousands of anchored mines, hoping thus to pen in the German forces and particularly to embarrass the movements of U-boats. Finally came the great barrier which was established from close to the Norwegian coast westward, within a comparatively short distance of the Orkney Islands. It was in this work that our own people splendidly cooperated.

According to Secretary Daniels: "The Navy has taken part in and actually laid eighty per cent of the great mine barrage, 230 miles long, from Scotland to Norway. A total of 56,439 mines have been laid, all of which were designed and manufactured by the United States and transported and laid by the United States Navy. The total personnel engaged in mining activity alone is upward of 6,700 men." The entire mine field, according to the Secretary's figures, must have contained quite 71,200