

## A Dark Day

*For exceptional meritorious service in a duty of great responsibility as commander of a division of trawlers, engaged in the difficult and hazardous operation of sweeping for and removing mines in the North Sea Barrage; and especially for his heroic conduct on the occasion of the destruction by mine explosion of his flagship, the Richard Bulkeley, of which he was also the commanding officer. Although stunned by the explosion, he made every effort to save the lives of and to rescue men entrapped by steam in the fire-room. The rapid sinking of the vessel prevented his success in the undertaking. Finding the ship about to sink, he proceeded to the bridge, where he took his station, and went down with the ship.*

—Citation for the Navy Distinguished Service Medal awarded posthumously to Comdr. Frank Ragan King, USN, who perished on 12 July 1919 while trying to save his ship—the USS *Richard Bulkeley*, a minesweeping trawler leased from the Royal Navy—and crew.<sup>1</sup>

Photo 1-2



Kirkwall Harbour, Orkney Islands, circa mid-1919, while serving as a base for the North Sea minesweeping detachment.

Naval History and Heritage Command photograph #NH 45256

Map 1-1



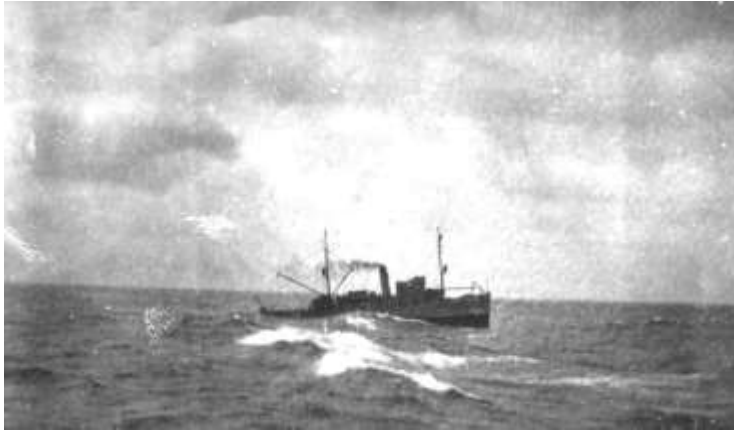
Scotland

On 12 July 1919, a group of U.S. Navy minesweepers operating from Kirkwall—a seaport and the capital city of Scotland’s Orkney Islands—were plying their dangerous vocation in the North Sea. They were assisted by sub-chasers, following astern; whose job was to destroy with gunfire, the deadly mines rising to the surface after the moorings tethering them in place were cut. World War I was over, Germany having signed an armistice with the Allies on 11 November 1918. While almost all American soldiers, sailors, and Marines were home from the war, enjoying hard-won peace, it was not so for the crews of the minesweepers and their counterparts aboard similar type ships of the Royal Navy. Grave danger continued to abound for ships in passage between Scotland and Norway, and along shores visited by mines torn from their moorings by fierce wind and wave, until Royal and U.S. Navy minesweeping forces cleared 70,263 mines (56,611 American and 13,652 British).<sup>2</sup>

The weather in the North Sea was notoriously bad throughout the year, and particularly so in the winter months. Dirty seas and the few short hours of daylight, made operations, including the sweeping, practically impossible for seven months of the year. It was important that the barrage be completely removed in the summer of 1919. Every possible moment and vessel available therefore had to be utilised. Five months had been required to lay the mines, but the task of bringing

profuse numbers of “ship killers” up from the depths and rendering them safe was, by known practice, infinitely more difficult and exacting.<sup>3</sup>

Photo 1-3



USS *Sanderling*, a *Lapwing*-class minesweeper, in heavy seas during North Sea Mine Barrage clearance operations, circa mid-1919.

Naval History and Heritage Command photograph #NH 107317

## A “MIXED BAG” OF SHIPS

The minesweepers and assisting ships had sailed from Kirkwall on 7 July. They were engaged on 12 July in the fourth of seven operations conducted by the American force between 29 April and 30 September 1919, when the barrage was finally cleared. Making up the forty-three ships assigned to this operation were groups of 187-foot steel-hulled *Lapwing*-class minesweepers (including *Curlen*, *Flamingo*, *Lapwing*, *Oriole*, *Pelican*, *Penguin*, and *Rail*), and wooden-hulled submarine chasers and minesweeping trawlers. Among the latter were sub-chaser *SC-46*, and trawlers *Richard Bulkeley* and *William Darnold* on lease from the Royal Navy. The fleet tug *Patapsco* was also present. Nine of these ten ships had been, or would be, damaged by mines between 7 and 17 July. Tragically, the tenth, *Richard Bulkeley*, was sunk with loss of life.<sup>4</sup>

But for the efforts of three of her sister ships operating in close enough proximity to provide assistance, *Pelican* would have been lost as well. Six mines exploded either close aboard or under her, rupturing her hull. As she filled with water and began to sink, *Ank* and *Eider* made up on either side, and *Teal* took the three ships in tow. After many hours of ceaseless pumping and labour of a dozen volunteers brave enough to remain aboard her, the group finally reached the shelter of Tresness Bay, on the southeast coast of Sanday in Orkney. From there, *Pelican* was taken to the Royal Navy base at Scapa Flow, where she was docked for

temporary repairs to enable her to be towed south to Newcastle-on-Tyne in northeast England, where complete repairs could be undertaken.<sup>5</sup>

### **DIFFICULTIES POSED BY AMERICAN SEA MINES**

Of the American and British mines that made up the North Sea Barrage, eighty percent had been laid by the United States Navy. Aside from the huge number, the American Mk VI mine presented almost insurmountable difficulties to planned clearance efforts on account of its novel design and sensitive firing device. The American mines, tens of thousands of large metal spheres packed with TNT, waited passively, suspended in the water column, held in place by tethers to anchors (resembling square metal boxes) on the bottom. Stretching upward from each mine body toward the surface was an antenna, seeking detection of a vessel passing close enough to detonate the explosives.<sup>6</sup>

Great Britain had gained extensive experience during the war in sweeping the types of mines which she had laid; she possessed minesweeping vessels with very shallow draughts, specially constructed for work of this nature; further, the work to be done was within close proximity to her coasts and operating bases. In addition to her portion of the North Sea Mine Barrage, Britain had other minefields to clear. There was also the Dover Barrage (a vast minefield laid between the coast of Belgium and Dover, designed to prevent the access of U-boats through the English Channel at its narrowest point) and miscellaneous minefields in the Heligoland Bight. The latter was a bay which formed the southern part of the German Bight, itself a bay of the North Sea, located at the mouth of the Elbe River.<sup>7</sup>

While methods of sweeping the British mines were understood, there was no known method of sweeping the mines which the United States had laid. With the uppermost end of an antenna at an average of 8 to 10 feet below the surface of the water, it was impossible for a steel-hulled ship to pass nearby without detonating the ordnance. A small piece of iron or steel no larger than a nail was sufficient to trigger the delicate firing mechanism. Consequently, it appeared that only wooden vessels would be safe in such a field, and then only provided that no metal projections, however small, were exposed on the hull of the ships.<sup>8</sup>

Photo 1-4



An American Mk VI mine, complete with anchor, recovered in the North Sea.  
Naval History and Heritage Command photograph #NH 2507

The most feasible idea appeared to be the use of wooden vessels (with their propellers guarded from contact with the mines) to explode mines near the surface using a sweep wire to make contact with the antenna. After all the surface mines had thus been destroyed, larger, steel-hulled *Lapwing*-class minesweepers could then sweep the mines planted at lower levels. For the first phase of the work, wooden, steam-powered minesweeping trawlers were chartered from the British Admiralty, manned with U.S. Navy crews. For crewing the vessels, 400 trained petty officers and seamen were taken from the American minelayers that had planted the barrage (before the ships' departure for America). They were transferred to bases in Scotland prior to assignment to the trawlers; the idea being to have experienced men serve as the nucleus of each crew.<sup>9</sup>

A solution was found subsequently, that partially alleviated the danger that mines posed to the steel *Lapwings*. Ens. Dudley A. Nichols, USN Reserve Force, came up with the concept of a protective device that would use electricity to prevent mines from exploding when struck by a ship. Following experimentation, specifications were drawn up for its manufacture and subsequent installation aboard the American minesweepers. Unfortunately, nothing could eliminate the possibility of

a mine exploded by contact with a sweep wire setting off others nearby. In such cases, the protective device would be useless.<sup>10</sup>

Photo 1-5



The first American mine swept up in the North Sea Barrage, exploding after it touched a sweep wire.

Naval History and Heritage Command #NH 109652

### **BRITISH TRAWLERS PRESSED INTO DUTY**

Requiring additional vessels for the impending minesweeping work, Rear Adm. Joseph Strauss, USN, the Mine Force commander, asked that thirty of the New England deep-sea trawlers acquired by the U.S. Navy during the war for patrol vessels, be sent to him for work in the North Sea. This did not occur as shortly after he made this request, the British Admiralty offered to provide, on charter, any number of newly built steam trawlers, if the Americans could furnish crews to man them. Being the most expedient solution, permission was obtained from the Navy Department to take over twenty trawlers, comprised of three different classes of vessels. The monthly rate of hire, respectively, for the 150-foot *Mersey*-class ships and for the smaller *Castle* and *Strath* types, was £240, £225 and £160. In the case of loss or damage, the United States would be responsible for the liabilities incurred.<sup>11</sup>

Lt. Comdr. E. N. Parker, USNRF (United States Naval Reserve Force), and Lt. T. D. Warner, USN, were sent to Falmouth, where eleven of these vessels were placed in commission with the assistance of the crew of cruiser USS *Chattanooga* and the British authorities. Parker and the *Chattanooga* later proceeded to Grimsby, England, where the nine remaining trawlers were turned over and commissioned before sailing for Kirkwall. Acquiring the vessels proved considerably easier

than obtaining personnel to man them. Orders had just been received to begin the release of men who had enlisted for the duration of the war; and the mine force was, accordingly, undermanned. Both in officers and men, crews were at a premium.<sup>12</sup>

By 2 June 1919, all of the trawlers had arrived at Kirkwall. Although they had been built expressly for minesweeping, it proved impossible to fit them with the electrical protective device. Thus, it was decided to use them at the rear of the *Lapwings* to cover their swept paths and catch any mines which might have been missed.<sup>13</sup>

### **LOSS OF TRAWLER *RICHARD BULKELEY***

The relatively new, ill-fated *Richard Bulkeley*, a *Mersey*-class trawler, had been launched on 21 August 1917 by Cochrane & Sons (a riverfront yard at Selby in Yorkshire, England), as a patrol and antisubmarine vessel for the Royal Navy. She was acquired 31 May 1919 and commissioned the same day. The trawler served thereafter as flagship of Comdr. Frank R. King, USN; the commander of one of the four divisions of trawlers.<sup>14</sup>

Photo 1-6



Minesweeping trawler USS *Richard Bulkeley* photographed by T. M. Trimble aboard the submarine chaser USS *SC-182*, date unknown.

*Sweeping the North Sea Mine Barrage*, U.S. Navy North Sea Minesweeping Detachment

Rapidly constructed for war service, she, like the *Castle* and *Strath* trawlers, was both economical to build and to operate. Powered by a single coal-fed boiler—providing steam to a 3-cylinder triple expansion engine, driving a single shaft and propeller—she could make a modest 11 knots. Her armament was equally austere. A single 12-pound gun

on the bow had likely afforded only a measure of comfort to her British crew during the earlier hostilities.<sup>15</sup>

Diagram 1-2

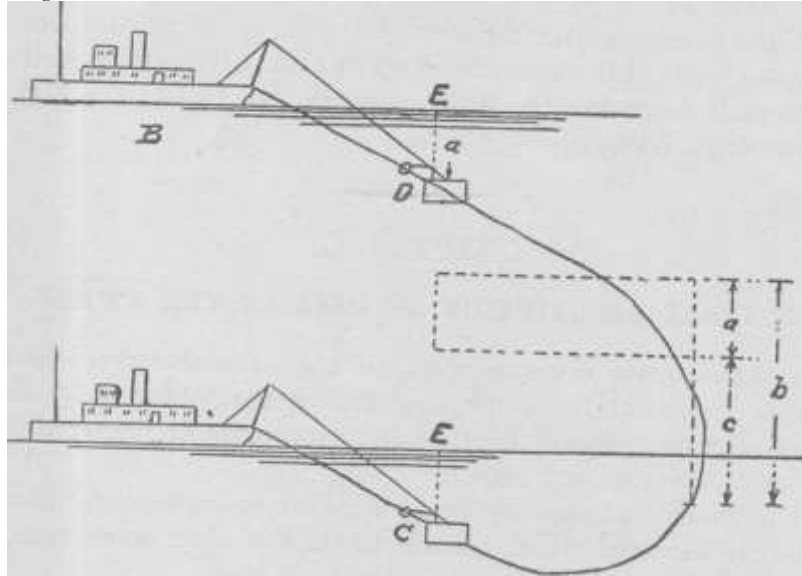


Diagram of two minesweepers steaming abreast of one another, at a distance apart about equal in yards to the number of fathoms of sweep wire out. The bight formed in the shared sweep wire, upon encountering the mooring cable of a mine in its path, either dragged the mine along with its anchor or, by seesawing, cut the mine's cable, letting the mine float to the surface, where it could be destroyed with gunfire. It was also possible that the sweep wire itself might explode the mine.

Source: *Mine Sweeping Manual United States Navy 1917*.<sup>17</sup>

Shortly before sunset on 12 July, *Richard Bulkeley* was sunk by the explosion of a mine fouled in the "kite" of her sweep gear. The Mine Force was using Type 7 plunger kites obtained from the British, a device which resembled a section of the wing of an airplane, except that it rode upside down in order to fly downward instead of upward. Although innovative at the time, the sweep gear was by the standards of WWII, rudimentary. There were no buoys to keep sweeps from striking the bottom, nor cutters affixed to sweep wires to sever the moorings of mines. Pairs of *Lapwings* operated together to clear the mines. Steaming abreast, with one end of a heavy wire made fast to each ship. Formed into a U-shaped catenary pulled down by a kite astern of each ship, the minesweepers employed the sweep wire to part (saw through) the wire cable moorings of tethered mines. Since this was done by friction,



sweep wires regularly parted, necessitating frequent replacement of sweep gear.<sup>16</sup>

Photo 1-7



Minesweep detail aboard the USS *Tanager* handling a "kite," circa 1918-1919.  
Naval History and Heritage Command photograph #NH 107321

Of greater significance, a sweep wire could inadvertently contact a mine casing often resulting in an enormous detonation and associated shock wave, which could then countermine (set off) other nearby mines. If one or more of these exploding spheres of TNT were close enough to a minesweeper, severe damage could occur to the vessels as well as injury and death to the crews.

Detailed information about the activities of trawlers in trail behind pairs of *Lapwings* through the field is scarce. Generally, in addition to sweeping, trawlers were employed to mark the boundaries of minefields, and to participate in the destruction of mines bobbing to the surface, once severed from their moorings. On the day she was sunk, *Richard Bulkeley* was likely sweeping in concert with another trawler (perhaps the *George Clarke*), before she had occasion to recover her sweep wire and fouled kite.

Men assigned to recover the gear had sighted the mine a few feet below the surface while bringing in the sweep wire. In an attempt to reduce the danger, the wire was immediately veered (payed out) in order to get the kite-gripped mine farther astern. For some unknown reason it exploded, breaching the after hull and allowing the trawler to fill and sink within seven minutes. Vessels of the Mine Force in the vicinity

rushed to her assistance, but before they could arrive she had disappeared into the deep of the frigid North Sea.<sup>18</sup>

The trawler USS *George Clarke*, under the command of Lt. (jg) Edwin V. Wilder, USN, was approximately 400 yards from the *Bulkeley* when the mine detonated. She steamed to the rescue, but was still over one-quarter that distance away when the stricken ship went down. She was able to retrieve twelve survivors and returned them to Kirkwall.<sup>19</sup>

Comdr. Ellis Lando, USN, the commander of Trawler Division 4 leapt overboard from his flagship USS *William Johnson*, into the rough, cold waters, to rescue Seaman First Class Antino Perfidio who was unconscious at the time. Although Perfidio died, Lando received the Distinguished Service Medal for his unselfish act of heroism.

Through the efforts of trawlers *George Clarke* and *William Johnson* and perhaps other vessels, all of *Richard Bulkeley's* crew was recovered except for one officer and six men (who drowned, were carried down with their ship, or perished following rescue) identified below.

- Comdr. Frank Ragan King
- Engineman 1st Class Floyd Harman
- Fireman 1st Class George M. Sowers
- Fireman 2nd Class George P. Rezab
- Ship's Cook 1st Class Antino Perfidio
- Seaman 2nd Class Homer Perdue
- Seaman 2nd Class John V. Mallon<sup>20</sup>

Photo 1-8



Survivors of the USS *Richard Bulkeley*, sunk by a mine caught in her sweep gear while conducting clearance operations in the North Sea.

Naval History and Heritage Command photograph #NH 121110

Comdr. Frank Ragan King was last seen on the bridge of *Richard Bulkeley*, after searching for members of his crew that might be trapped aboard as the trawler settled lower and lower in the water. When a sailor struggled to the deck half stunned by the shock of the explosion which had blown off his life preserver, King had taken off his own lifebelt, buckled it around the man, and helped him to get clear of the vessel before it plunged, stern first, beneath the surface.<sup>21</sup>

Photo 1-9



Portrait of Frank Ragan King, USN, taken while a lieutenant prior to WWI.  
Naval History and Heritage Command photograph #NH 843-A

King was awarded the Navy Distinguished Service Medal (posthumously) for extraordinary heroism, as was also Seaman Second Class John V. Mallon, USN. At the time of the mine explosion, Mallon was on duty as signalman of the watch and remained at his post on the bridge and went down with the ship. Although his citation does not detail his actions, Mallon was likely signaling vessels steaming toward the trawler in fading light, the locations of shipmates in the water, perhaps injured, struggling to stay afloat in the frigid sea.<sup>22</sup>

## **AFTERMATH**

At a conference aboard the *George Clarke* the following day, Rear Admiral Strauss decided that the hulls of the trawlers were not strong enough to withstand the shock of mine detonations close aboard. The wooden vessels had been assigned to follow the initial sweeps of the more heavily built, steel-hulled *Lapwings*, but even this had proven too much for ships of their design when confronted with exploding mines—more of which were left for follow-up sweeps than had been estimated.<sup>23</sup>

Such danger would continue to exist, so Strauss opted to return the majority of the trawlers to the Admiralty, retaining only six to be used for miscellaneous purposes, transporting stores from Inverness, in the Scottish Highlands, to Kirkwall and carrying minesweeping gear and provisions to vessels in the minefield. In the case of *George Clarke*, preparations for her return to Admiralty custody began in mid-July at Kirkwall and were completed with her transfer to the Royal Navy, at Brightlingsea, England, on 16 August 1919.<sup>24</sup>

A few months later, in commemoration of the gallantry of Frank Ragan King, the Secretary of the Navy named a new ship, USS *King* (DD-242), in his honour. His namesake, a *Clemson*-class destroyer was commissioned on 16 December 1920.<sup>25</sup>