Death By Parachute - German Aerial Mine Warfare

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In the very first days of WW2, before our troops sailed for France, long before the RAF held the Luftwaffe at bay in the Battle of Britain, the Germans launched their first offensive. They used a secret weapon, dropped stealthily at night by lone low flying bombers. Each day, sailing along our coasts, entering or leaving harbour, our ships were being sunk. During September, October and early November of 1939 the number of ships being sunk was becoming unsustainable. Before long we would have to close many of our vital ports. The essential flow of supplies, Britain’s lifeline, would be halted. This secret weapon was proving so effective Churchill was worried we might have to ask Hitler for peace terms in those first months of the war. Here for example are excerpts from a situation report made to the War Cabinet during November 1939...

German mining of British waters intensifies

The Naval, Military and Air Situation up to 12 noon on 23 November 1939 as reported to the War Cabinet:

Naval Situation

General Notes.

1. The outstanding events during the week under review has been the intensified German mining operation in the Thames Estuary and off the Humber, in which aircraft have played an important part. Enemy mines in these areas have accounted for five British, one French and five neutral merchant ships. As a precautionary measure Harwich, Humber and Thames were temporarily closed to shipping, the Humber and Thames being re-opened on the morning of 23 November to a restricted degree. The Germans are apparently using a magnetic mine which raises new and difficult problems of minesweeping.

2. It in consequence of this illegal use of mines, following on the numerous instances of German disregard of the accepted rules of International Law in their attack on British sea-borne trade, His Majesty’s Government has decided to institute control over German exports as a reprisal.

3. Minelaying by enemy aircraft, using parachutes, was carried out by moonlight on the night of the 20th, 21st and 22nd of November on the East Coast. A number of minor unsuccessful attacks by aircraft on naval vessels in the North Sea have taken place.

5. H.M.S.Belfast (10,000 ton 6 inch gun cruiser) was damaged by a mine on the morning of 21 November in the Firth of Forth and was subsequently towed to and docked in Rosyth. Damage is said to be extensive. Three ratings were seriously wounded and seventeen slightly wounded.

7. H.M.S.Gypsy (destroyer) was mined at the entrance of Harwich Harbour on the night of 21 November. She was proceeding to sea outside the normal channel as aircraft had been observed to lay
mines in the Fairway. She is now beached with her back broken. One officer was seriously wounded and two slightly wounded; 29 ratings are missing presumed killed, 1 rating was badly wounded and 10 slightly wounded.

It fell upon the Royal Navy to come up with an answer. We needed to get our hands on one of these secret weapons. It was a mine, we knew this much. Not like the simple contact mines of the First World War, but a technical masterpiece developed in Germany in the 1930s in preparation for the war to come. It was a magnetic mine. Designed to be dropped into shallow coastal waters, at night, by parachute. There it would lie silently active on the sea bed, safe from the minesweepers. Eight feet long, 22" diameter, containing 1500lbs of explosive. Waiting for a large metal ship to sail above it. The ship’s magnetic field would trigger a massive explosion, lifting the ship out of the water often breaking it in two.

Like so many things in war it was luck that proved our salvation. All attempts to trawl and lift these mines proved disastrous, sinking the unfortunate ship above. Then by chance one night in November 1940 an inexperienced navigator led his pilot astray and two mines were dropped in the shallow tidal waters of the Thames Estuary near Shoeburyness. The next piece of luck was they didn’t explode when the falling tide exposed them, as they were designed to do. The final stroke of luck was that these mines were seen from an army camp which happened to be nearby. Two naval officers, Lt. Cdr Ouvry and Chief Petty Officer Baldwin, from HMS Vernon in Portsmouth, were called in to deal with them. If possible, to render them safe so that we could investigate how they worked. These incredibly brave men waded out through the deep tidal mud and blindly removed the fuzes and other mechanisms. The mines were safe.

Now our scientists went to work. Within weeks they worked out a way to hide a ship from these mines by changing its magnetic signature. A process called de-gaussing. This was shortly followed by a method of sweeping the mines at sea using electrical sweeps. During the early Summer of 1940 the number of sinkings was drastically reduced.

The failure of this secret weapon to bring Britain to her knees was one of Hitler’s early disappointments. There was no need, however, for the ingenuity with which it had been manufactured to be lost. It had been designed as a dual purpose weapon: not only a sea mine, but also to detonate as a heavy bomb when it fell on land.

The magnetic mine was a triumph of German ingenuity, a top secret terror weapon. As well as the magnetic switch to detonate the underwater mine beneath a passing ship there was also a type 34 bomb fuze. This was there initially as a self destruct mechanism, to prevent us from obtaining a mine and dismantling it. On impact the clockwork fuze started a run of seventeen seconds, which if completed destroyed the mine and as a consequence it’s immediate surroundings. However it also had a hydrostatic pressure switch built into it. If the mine fell in water as intended, the water pressure at depth depressed a small plunger and stopped the clock mid run, allowing the magnetic detonator mechanism to play it’s role instead. If the mine was lifted or exposed by a low tide the pressure was taken off the plunger and the clock completed its run destroying the mine. Hence any mine unintentionally drifting ashore as is fell slowly by parachute, or dropped purposely on land would act as a large bomb. 1,500lbs of explosive going off on the surface can do a lot of damage.

In a fit of rage, Hermann Goering is said to have bellowed ‘Drop them on London!’ Early in September 1940, the blitz on the capital began. By the middle of September, first over the docks and later indiscriminately over the whole of the Greater London area the German bombers added what were then called Parachute Landmines to the incendiaries and conventional bombs.
As they were officially sea mines and not bombs the Royal Navy assumed the role of dealing with ones which had failed to explode. These Render Mine Safe teams, initially based at HMS Vernon, then at the Admiralty in London were called upon to deal with many incidents, not without several tragic losses. As the blitz continued through October 1940, the German High Command ordered the attacks to be carried beyond the capital. Landmines were now dropped indiscriminately over towns and cities such as Birmingham, Liverpool, Manchester, Coventry, Sheffield, Hull and many others. For six long months these raids continued unabated.

By November 1940 small Render Mine Safe teams were established. These consisted of one officer, a naval rating and a car and driver. Situated at strategic points around the country: Birmingham, Leeds, Edinburgh, Cardiff, Newcastle upon Tyne. Few in number they were supported by previous ‘Blitz’ teams from HMS Vernon in Portsmouth. Often at night, following a raid, they sped through the country in fast black Humber staff cars, loud bells ringing, called to the mines which failed to explode.

The job of rendering them safe fell upon these few brave naval officers. Some had only two weeks training. As they approached these unexploded mines the first question going through their minds would have been, ‘Why hasn’t the clock finished its run, how many seconds are left?’ Sometimes the reason the mines failed to explode was the clock activation jammed on impact. Any slight disturbance and the clock would run again. Even worse it may have run fifteen seconds before sticking and only have two ticks before annihilation. Knowing this, these brave men approached the mines, often in cramped enclosed spaces with no means of retreat, and carefully, using primitive tools removed the fuze by hand. Most succeeded some did not. Later a genius worked out that they could use an inflated rubber car horn. This when attached to the fuze head acted as a ‘gag’. It fooled the mine into thinking it was under water, the pressure switch being depressed, so that the clock couldn’t run. This made things a bit safer and the RMS officers earned the name ‘Hornblowers’. Until the Germans found out what we were doing. Their answer, a simple hole drilled in the side of the fuze which allowed the pressure in the horn to bleed into the fuze pocket. Men died finding that out, until someone was lucky enough to draw a dud fuze and find the new hole. What next, a mechanical gag called a dart. This was screwed into the small hole in the top of the fuze through which water entered. When the dart’s plunger was pushed in, it depressed the hydrostatic switch and stopped the clock. Safe again for a while. Then another change, the Germans forever vigilant modified the water channel, adding a dogleg. The mechanical gags didn’t work anymore. Finally, the solution used was dental impression paste. Mixed beside the mine and injected into the fuze it would push the pressure switch down and set hard holding it in place. A successful solution that worked until war’s end.

By June 1941 the incidence of parachute mines began to subside as the RAF gained control of the British skies. Our Render Mines Safe teams became the ‘Land Incident Section’ in September 1940 and were now well trained and equipped to deal with this menace. The threat of the parachute mine diminished.

Is this the end of the story, well it could be, but we need to consider the Germans weren’t defeated. Close behind magnetic mines there was the acoustic mine, then the pressure mine and even the notorious BD1000 the Luftwaffe’s version of a magnetic mine, dropped like a bomb, with photosensitive cells to trap the unwary officer who dared to open it up and look inside. But these are another story.