In the *Hydrographic Bulletin* of the United States Navy, December 31, 1913, the following reference is made to the use of oil to calm seas:

"*Imperial Transport* (Br. ss.), Capt. E. R. Frankland:

"On November 25, 1913, during the voyage from Narvik toward Philadelphia, a hurricane struck the vessel from the southwest, gradually shifting to the westward. The hurricane was of such force that it was found impossible to steam against it. The engines, therefore, were stopped, and the vessel, losing headway, fell off beam-on to the sea. During this operation oil was used plentifully, several pints being thrown on the deck, and the same washing overboard to windward smoothed the tops of the seas, thus stopping them to a great extent from breaking on board. When the vessel was drifting, two oil-bags were hung overboard to windward, one at each end of the bridge deck, each bag being attached to fifteen fathoms of line, this usage greatly assisting in arresting the force of the seas. One oil-bag was hung in the forward lavatory at the break of the forecastle head, and the flush left open, the oil thus coming in contact with the sea without being blown to leeward. The same operation was repeated in the lavatory amidships. A hand was stationed in each of these places replenishing the oil-bags. During the squalls a little oil was also poured down the pipes from a can. The seas, although breaking heavily to windward, had the force taken out of them when coming in contact with this second distribution of oil. We subsequently encountered seven hurricanes, and oil was used in the same manner and with the same effect. The oils used were fish, colza, engine, and linseed, and no apparent difference in effect was noticed. All of the hurricanes started from the south and veered to north through west, and then backed from north to south through west. The same was experienced in the storms of lesser violence. At no time during the passage was the wind from the eastward unless at the beginning of the storm, when sometimes it was SSE. I might add that the vessel came through with the minimum of damage, considering the terrific weather encountered."

A more recent test of this device was made by the revenue-cutter *Seminole*. In reply to my inquiry, Capt. G. L. Carden says, under date of January 11, 1914:

"I am attaching herewith a memorandum relative to the use of oil by the *Seminole* when working on the schooner *Thomas Winsmore*. As a further proof of the efficacy of oil, I had occasion during the month of October, 1910, when commanding the *Manning* in the Pacific, to have recourse to it. We had left Kodiak Island for a run across to the Alaska coast, shaping for Cape Ommaney. It had been blowing a gale of wind for three days from the northwest and, not long after clearing the lee of Kodiak, I encountered a tremendous sea. Nothing like it had been seen during the entire past five months in the far North. The *Manning* was put before the seas, but it seemed as if every moment they must break aboard. In the mouths of the forward closet bowls, on either side of the bow, canvas bags filled with oakum were placed. The bags were punctured with ordinary sail needles, and a plentiful supply of fish oil was poured into the oakum-filled bags. The closet traps were then raised and very soon a thin film of oil was seen to reach out on either side of the ship for a distance of about ten feet, spreading out fan-tail fashion as it worked aft. At a distance of twenty feet abaft the stern, I should say, the width of the oil space was fully fifty feet. The effect was marvelous. The big seas would come up right to the edge of the oilfield and then dive under the ship and pass away forward. The film of oil alongside kept the seas from slapping aboard. I ran the *Manning* very slowly throughout the greater part of the night, but towards morning the wind and sea abated and we were able to head up on our regular course. During the entire night I do not believe we used over ten gallons of oil."

"*Memorandum*:—The American schooner *Thomas Winsmore* was found at 7.30 a. m., January 4, 1914, close to the breakers on Lookout Shoals. The *Seminole* at the time was in charge of First Lieut. Eben Barker. A fresh westerly gale was blowing. The *Thomas Winsmore* was displaying her ensign union down. The seas were breaking completely over the schooner. The *Seminole* anchored to windward of the *Winsmore,* veering down chain so as to bring the cutter near the schooner. Efforts to shoot a line aboard by means of a line-firing gun proved abortive. Oil was used freely through the closets forward. The oil formed a slick astern of the *Seminole* and prevented the seas from breaking. After a plentiful use of the oil, a pulling boat was lowered and a four-inch line was run to the *Winsmore.* By means of the four-inch line a ten-inch hawser was later gotten aboard the distressed craft. The *Winsmore* was then towed into the lee of Lookout Bight."