No. 826,286. PATENTED JULY 17, 1906.

H. W. STOCKING.

OIL DISTRIBUTING APPARATUS.

APPLICATION FILED DEC. 26, 1905.

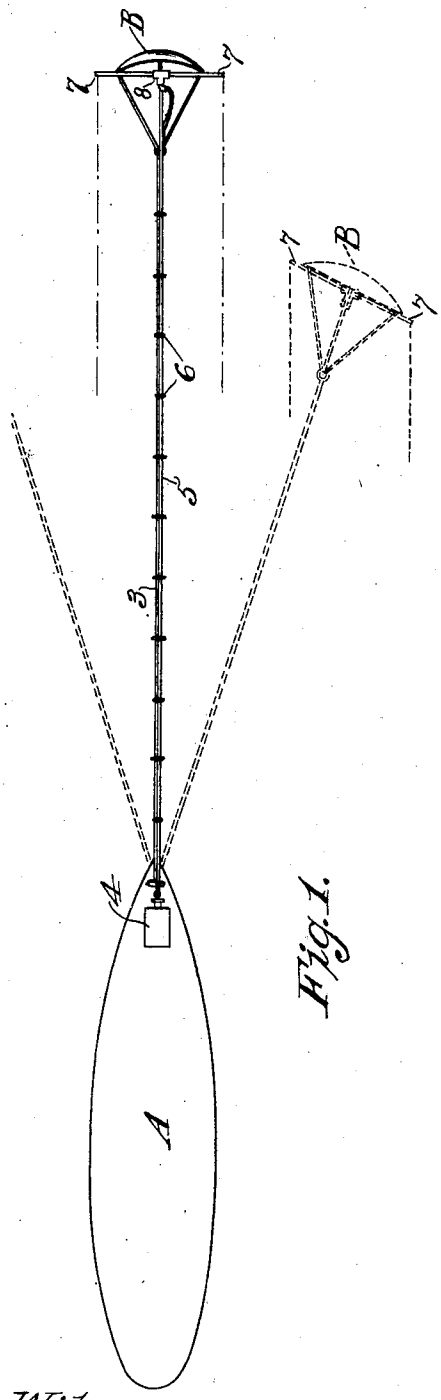


Fig. 1.

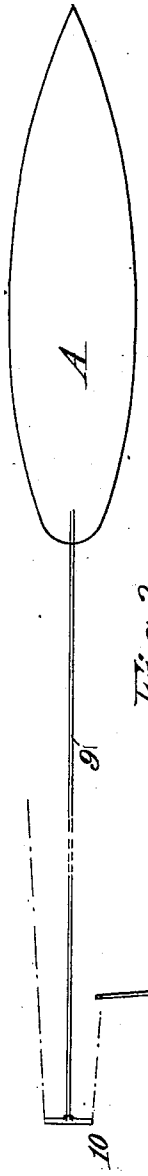


Fig. 3.

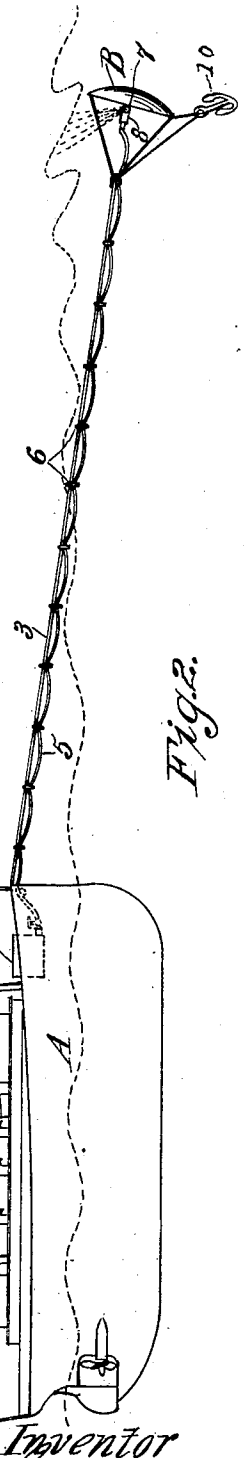


Fig. 2.

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UNITED STATES PATENT OFFICE.

HARRY W. STOCKING, OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR OF FIVE TWENTY-FOURTHS TO C. J. VOLK, FIVE TWENTY-FOURTHS TO A. G. STOLL, AND FIVE TWENTY-FOURTHS TO H. T. JAMES, OF SAN FRANCISCO, CALIFORNIA.

OIL-DISTRIBUTING APPARATUS.

No. 826,286. Specification of Letters Patent. Patented July 17, 1906.

Application filed December 26, 1905. Serial No. 293,314.

To all whom it may concern:

Be it known that I, HARRY W. STOCKING, a citizen of the United States, residing in the city and county of San Francisco and State of California, have invented new and useful Improvements in Oil-Distributing Apparatus, of which the following is a specification.

My invention relates to an apparatus which is designed for distributing oil to the windward of a vessel in case of storms or rough weather which endangers the safety of the vessel, and especially for enabling such distribution to be made at a sufficient distance from the vessel to measurably quiet the sea before it reaches the vessel's position.

It consists in the combination of parts and in details of construction, which will be more fully explained by reference to the accompanying drawings, in which—

Figure 1 is a plan view of the vessel, showing the oil apparatus attached. Fig. 2 is a side view thereof. Fig. 3 is a view showing the apparatus to the stern of the vessel.

When great storms are in progress, it frequently becomes necessary for vessels to heave to and to ride the storm out with the bow toward the wind, and in order to maintain the vessel's position where little or no sail can be carried it is customary to employ what is known as a "drag-anchor," which is paid out to a considerable distance from the bow of the vessel and by its resistance helps to retain the vessel's head to the wind.

It is the object of my invention to combine with such a device a means for distributing oil upon the surface of the water at such a distance from the vessel that the sea will become measurably calmed and its force against the vessel will be greatly reduced.

A represents a vessel of any description, and B is what is termed a "drag-anchor," such anchors being made of suitable framework with heavy canvas stretched over it to form a concavo-convex or umbrella-shaped disk of considerable diameter. 3 is a hawser connecting this anchor with the vessel, and means are provided by which the anchor is maintained in position and prevented from rotating. The object of this will be hereinafter explained. The cable may be paid out to locate the drag-anchor as far away from the vessel as may be found desirable.

Upon the vessel is located a tank 4 of any suitable description, and from this tank a suitably-connected conducting-pipe 5 extends, which may be reeled or otherwise disposed upon the vessel when not in use. This pipe is supported from the hawser by suspending devices at intervals, as at 6, and as the hawser is paid out the pipe is carried with it. Upon the drag-anchor B is a nozzle through which the oil may be discharged in close proximity with the anchor. I have here shown a pair of such nozzles, as at 7, radiating outwardly and transverse with relation to the drag, having their inner ends connected with a T, as at 8, with which T the oil-conducting pipe is also connected, so that the oil may be distributed outwardly from each side of the drag, thus covering considerable space. It will be understood that any suitable forcing mechanism may be connected with the tank, such as a pump either acting directly upon the oil or to force air into the upper part of the oil-containing tank and through its pressure to discharge the oil, this forming no part of my invention.

By this construction and connections the oil may be forced outwardly to any desired distance from the vessel and to the windward thereof and distributed over a very considerable space of the ocean, so that the well-known fact of oil for calming the seas is produced at such a distance from the vessel that the latter will be in a great measure protected from the violent effects of the breaking seas, and this protection will extend to a considerable distance to each side of the vessel on account of the divergence given to the oil at its discharge and its well-known quality of further spreading upon the surface of the water. During the height of the gale and while the vessel is hove to the proper protection will be given to the vessel. If the wind subsides sufficiently for the vessel to return to her course or if by change of wind there is a following sea, a second flexible pipe 9 is led rearwardly from the stern of the vessel, being supported by a float of any suitable description, as at 10, and the distribution may take

place in a similar manner at this point, the float being located at such a distance from the stern of the vessel by means of the supporting-hawser that the discharge of oil upon the surface of the sea will calm it and prevent the danger of following seas, which might otherwise break over the stern or upon the quarter of the vessel.

It will be manifest that the same or an equivalent device may be applied upon dangerous beaches where a heavy surf is driven in from the windward, and by locating the support for the oil-discharge pipes at a considerable distance away from the beach the surface of the water and the breakers may be calmed sufficiently to allow life-saving boats to put out with comparative safety.

Fig. 1 shows in dotted lines how two drag-anchors may be veered to either side of the direct line of the vessel by connecting them at a slight angle, so that the drag upon them will throw them outwardly from such a line. With such construction it will be understood that each of the cables will carry a separate line of pipe and each of the anchors have a separate distributing apparatus, so that the oil thus distributed will spread over a wide surface with relation to the position of the vessel.

10, Fig. 2, shows an anchor or weight suspended from the lower part of each of the drag-anchors or floats. This weight serves to maintain the floats in their normal position and prevent their rotating by the action of the waves. Thus the discharge-nozzles which are carried by the floats are always maintained in a certain relative position with the surface of the water.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In an apparatus for distributing oil upon the surface of the sea, a tank, a flexible pipe connecting therewith, anchoring means furnishing a support for the pipe and divergent connections horizontally from the end of said pipe said connections adapted to discharge oil upon opposite sides of the anchoring means.

2. In an apparatus for distributing oil upon the surface of the sea, the combination of a drag-anchor, a hawser connecting the same with the vessel, an oil-supply, a flexible pipe connecting therewith and extending along the hawser, means suspending the pipe at points on the hawser, and divergent connections at the end of the pipe adjacent to the anchor, adapted to discharge oil upon opposite sides of the latter.

3. In an apparatus for distributing oil upon the seas, a drag-anchor or float, a flexible cable by which it is connected with the vessel and its distance therefrom determined, an oil-containing receptacle located upon the vessel, a flexible pipe extending from said oil-supply to the float, means by which said pipe is suspended at intervals from the cable, divergent connections horizontal from the end of the pipe and nozzles through which oil is discharged upon opposite sides of the float.

4. In an apparatus for distributing oil upon the seas, a drag-anchor or float, a flexible cable by which it is connected with the vessel and its distance therefrom determined, an oil-containing receptacle located upon the vessel, a flexible pipe extending from said oil-supply to the float, means by which said pipe is suspended at intervals from the cable, divergent connections horizontal from the end of the pipe, nozzles through which oil is discharged upon opposite sides of the float, and means whereby the drag or float is prevented from turning and the horizontal position of the discharge-pipe maintained.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

HARRY W. STOCKING.

Witnesses:
S. H. NOURSE,
D. B. RICHARDS.