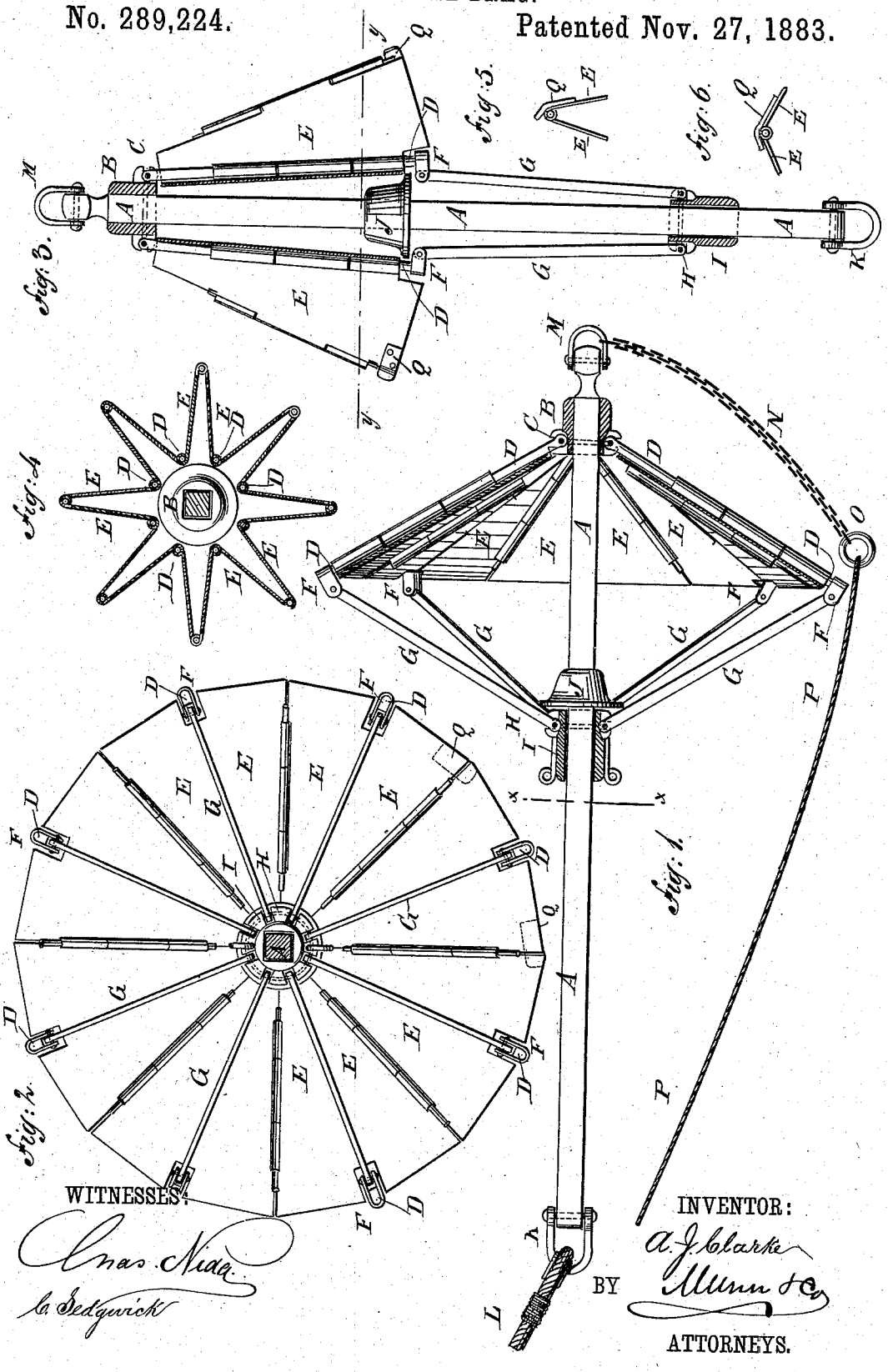
(Model.)

A. J. CLARKE.

MARINE DRAG.

No. 289,224. Patented Nov. 27, 1883.



WITNESSES:

Chas. Nida.

La Sedgwick

INVENTOR:

A. J. Clarke

BY Munn & Co

ATTORNEYS.

N. PETERS. Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

AMBROSE J. CLARKE, OF BROOKLYN, NEW YORK.

MARINE DRAG.

SPECIFICATION forming part of Letters Patent No. 289,224, dated November 27, 1883.

Application filed June 15, 1883. (Model.)

To all whom it may concern:

Be it known that I, AMBROSE J. CLARKE, of Brooklyn, Kings county, and State of New York, have invented a new and useful Improvement in Marine Drags, of which the following is a full, clear, and exact description.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a sectional side elevation of my improvement. Fig. 2 is a front elevation of the same, partly in section, through the line *x x*, Fig. 1. Fig. 3 is a sectional side elevation of the same closed. Fig. 4 is a sectional front elevation of the same closed, taken through the line *y y*, Fig. 3. Fig. 5 is an end view of two of the wings when closed. Fig. 6 is an end view of two of the wings when opened.

The object of this invention is to facilitate the heaving of vessels to.

The invention consists in a marine drag constructed with a shank provided with a stationary runner, to which are hinged the ribs, and a movable runner, to which are hinged the stretchers. The said ribs and stretchers are hinged to each other, and to the ribs are hinged the edges of triangular plates, having the other edges of the adjacent plates hinged to each other, whereby the drag will be opened by the resistance of the water. To the outer end of the drag-shank and to the trip-line are attached the ends of a chain, the weight of which will hold the trip-line below the ribs and plates, so that the said trip-line will be kept from being fouled, as will be hereinafter fully described.

A represents the shank of the drag, which I prefer to make square in cross-section, and to the outer end of which is secured, by rivets, collars, or other suitable means, the stationary runner B.

To the runner B are hinged, by a wire ring, C, or other suitable means, the ends of the ribs D, to which are hinged the edges of triangular metallic plates E, in such a manner that the said plates E can fold outward. The other edges of the adjacent plates E are hinged to each other between the ribs D in such a manner that the said plates can fold inward.

To the corner of each alternate wing E, at the joint midway between the ribs D, is attached a small plate, Q, the end of which projects beyond the said edge, and is bent at an obtuse angle, so that the outer side of the corner of the other wing will rest against the said end when the drag is opened, the said plates Q serving as stops to prevent the wings from folding in the wrong direction, and thus preventing the drag from closing snugly when the drag is reversed and is being drawn in.

To the outer ends of the ribs D are hinged, by clevises or lugs F, or other suitable means, the outer ends of the stretchers G, the inner ends of which are hinged, by a wire ring, H, or other suitable means, to the movable runner I, which slides upon the shank A, and the outward movement of which is limited by a collar, J, or other suitable stop, attached to the said shank A.

To the inner end of the shank A is attached, by a clevis, K, or other suitable means, the end of a hawser, L, the other end of which is secured to the vessel.

To the outer end of the shank A is secured, by a clevis, M, or other suitable means, the end of a chain, N, which is made longer than the ribs D, and has a heavy ring, O, attached to its free end.

To the ring O is attached the end of a line, P, extending to the vessel.

With this construction, when the drag is to be used, it is thrown overboard folded, as shown in Figs. 3 and 4, a suitable length of the hawser L is paid out, and the hawser is then secured to the vessel. When the drag is put under strain by the drifting of the vessel, the resistance of the water opens the said drag into the position shown in Figs. 1 and 2, so that the water will offer a sufficient resistance to the drag to hold the vessel to the wind. When the drag is to be taken in, the line P is drawn upon, which swings the drag around, so that the resistance of the water will close the said drag and allow it to be easily drawn in by the said trip-line P.

With this construction, the weight of the chain N holds the said chain below the lowest ends of the ribs D, so that the trip-line P cannot be fouled by the movements of the drag in the water.

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

1. A marine drag constructed substantially as herein shown and described, and consisting

of the shank A, having stationary runner B and movable runner I, the hinged ribs D, the hinged plates E, and the hinged stretchers G, as set forth.

2. In a marine drag, the combination, with the shank A, the runners B I, the ribs D, and the stretchers G, of the triangular plates E, hinged to each other and to the ribs D, substantially as herein shown and described, whereby the drag will be opened by the resistance of the water, as set forth.

3. In a marine drag, the combination, with the hinged wings E, of the angular stop-plates Q, substantially as herein shown and described, whereby the said wings are kept from folding in the wrong direction, as set forth.

4. In a marine drag, the combination, with the shank A, runners B I, ribs D, stretchers G, hinged triangular plates E, and trip-line P, of the chain N, substantially as herein shown and described, whereby the said trip-line will be kept from being fouled, as set forth.

AMBROSE J. CLARKE.

Witnesses:

JAMES T. GRAHAM,

EDGAR TATE.