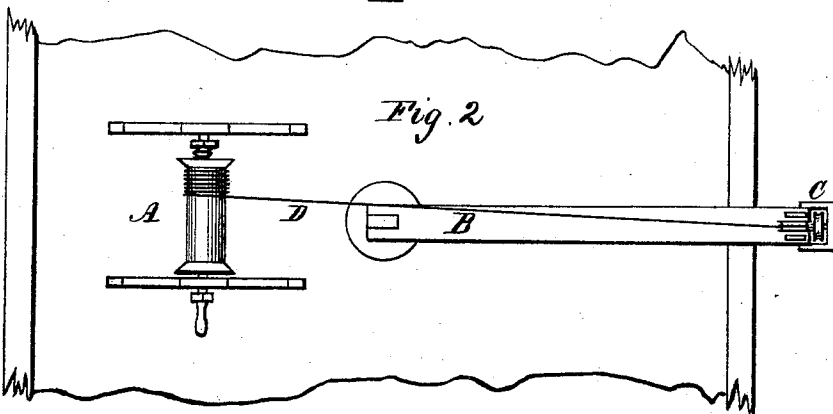
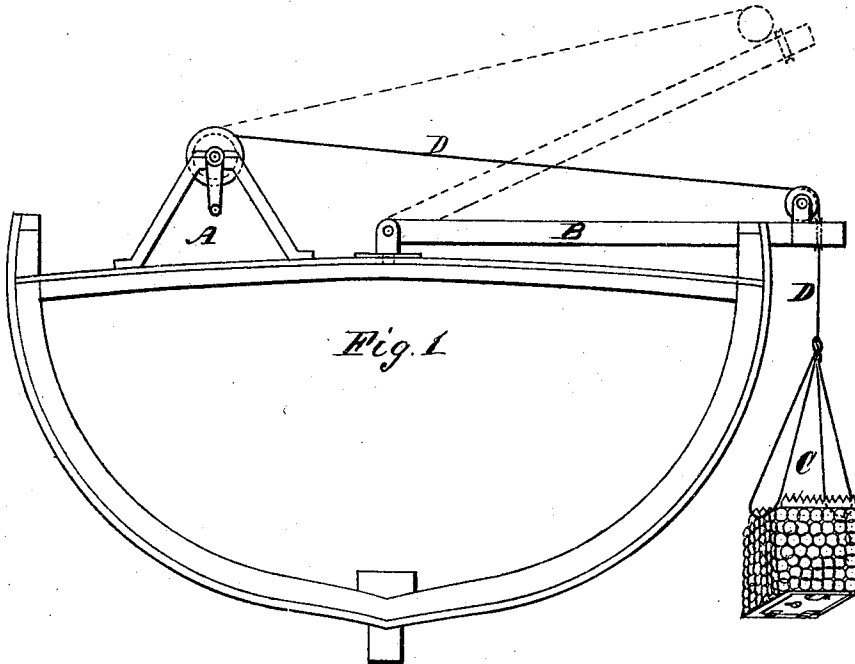


W. C. HORNFAGER & M. FITZGIBBONS.

Oyster Dredges.

No. 141,439.

Patented August 5, 1873.



Witnesses.

Wilmot A. Hornfager
T. L. Blackwell Jr

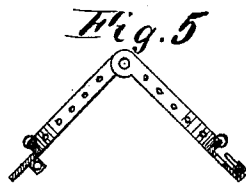
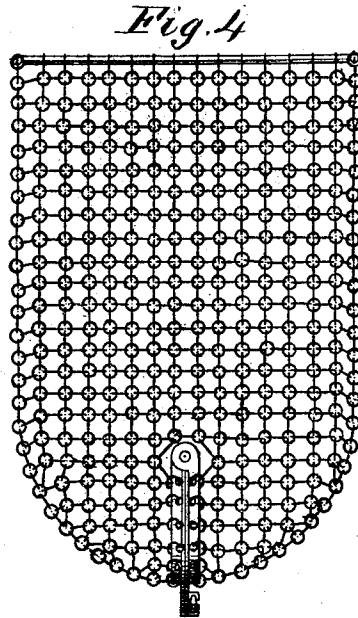
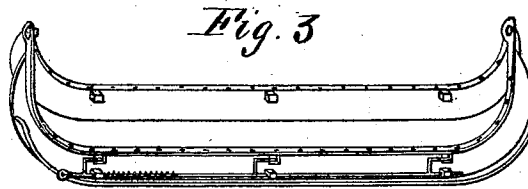
Inventor.

William C. Hornfager
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UNITED STATES PATENT OFFICE.

WILLIAM C. HORNFAGER AND MAURICE FITZ GIBBONS, OF NEW YORK, N. Y.

IMPROVEMENT IN OYSTER-DREDGES.

Specification forming part of Letters Patent No. **141,439**, dated August 5, 1873; application filed December 20, 1872.

To all whom it may concern:

Be it known that we, WILLIAM C. HORNFAGER and MAURICE FITZ GIBBONS, of the city, county, and State of New York, have invented certain new and useful Improvements in the Making or Constructing Machinery or Apparatus for Dredging Oysters; and we hereby declare that the following is a clear, full, and exact description of the same, reference being had to the accompanying drawings making part thereof, and in which—

Figure 1 represents a transverse sectional view of a vessel having our improvement, consisting of windlass A, swivel-jointed rotating arm or lever B, dredge C, and rope or cable D. Fig. 2 represents a plan view of the windlass A, swivel-jointed rotating arm or lever B, and rope or cable D. Fig. 3 represents a clasp or device for opening and closing the bottom of the dredge. Fig. 4 represents a side view of the oyster-dredge closed at the bottom. Fig. 5 is a sectional view of the clasp or spring and closing device.

Having stated the nature and object of our invention, we proceed to describe its construction.

The first part of the invention relates to a swivel-jointed arm or lever, B, Figs. 1 and 2, extending from the center of the deck of the vessel to and over the side rail, constructed as follows:

A socket is made into the deck of the vessel, or a box-plate fastened to the deck having a socket, in which the hinge-joint bolt is inserted, and in which the bolt can be made to revolve. The upper part of the bolt has a flange resting upon the base or deck of the vessel, above which is a hinge-joint having its counterpart with the lever, which is constructed either of wood or metal, having a pulley over which the rope or cable passes from the windlass to the dredge.

The second part of our invention relates to an oyster-dredge, C and D, Fig. 1 and Figs. 3, 4, and 5, constructed as follows:

The frame-work is made of two metallic bars bent in the form of a loop, coming together at the top and fastened together. The bottoms

are spread apart, and cross-bars attached on either side, upon which are attached rows of metallic teeth, which together form the mouth of the dredge, Fig. 1, C. Upon this frame a chain-bag is constructed, of any desirable size, Fig. 1, C, and Fig. 4. At the bottom of the dredge so far constructed is attached a device for closing and opening the dredge so as to discharge the oysters at the bottom, Fig. 1, C, and *d*, Figs. 3, 4, and 5. This opening and closing device is constructed as follows:

It consists of two metallic plates, curved at the ends, counterparts of each other, and joined together at each end by a rivet, forming a movable joint. Upon one of the plates are projections, which, when closed, pass through openings in the counterpart. These projections are for the admission of a bolt. Upon the other plate are like projections having openings. Through these openings a bolt is passed having prongs attached upon one side, so arranged as to pass through the opening of the projections on the counterpart. Upon this bolt is placed a spiral or other spring, which, by its tension, forces the pronged bolt into the openings, and retains them in that position.

Having described the nature, object, and construction of our invention and improvement, we proceed to describe its operation, as follows:

The rope or cable, being coiled upon the spool of the windlass, is passed over the lever, through the pulley, and attached to the dredge. The dredge is thrown over the side of the vessel, and cable paid out so as to permit the dredge to drag at the bottom. The dredge being held in position by the ratchet-pawl, and being dragged upon the bottom by means of the teeth, take up the oysters, which are forced in the dredge till filled, when the same is to be drawn up by the windlass. When the top of the dredge strikes the lever it is raised above and swung over the rail of the vessel to any portion of the deck within range of the lever. The bolt at the bottom of the dredge is then withdrawn. The bottom is opened by the press-

ure of the superincumbent oysters, which are discharged by their own gravity, either upon deck or into the hold of the vessel. The opening and closing device at the bottom will close automatically by being pressed together.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. An oyster-dredge constructed substantially as herein described, and having an opening and closing device at the bottom for discharging the oysters, as and for the purposes hereinbefore described.

2. The combination of windlass A, Fig. 1, and swivel-jointed arm or lever B, Fig. 1.

3. The combination of windlass A, swivel-jointed lever B, and dredge C, substantially as and for the uses and purposes hereinbefore set forth.

WILLIAM C. HORNFAGER.
MAURICE FITZ GIBBONS.

Witnesses:

HARRY COLEMAN,
WM. S. HENDERSON.