

(No Model.)

2 Sheets—Sheet 1.

T. THOMAS.
COMBINED DRILL AND OYSTER DREDGE.

No. 589,047.

Patented Aug. 31, 1897.

Fig. 1.

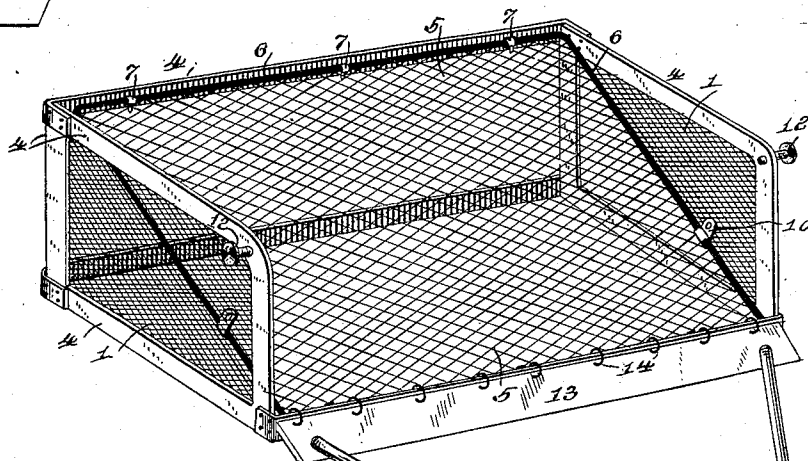
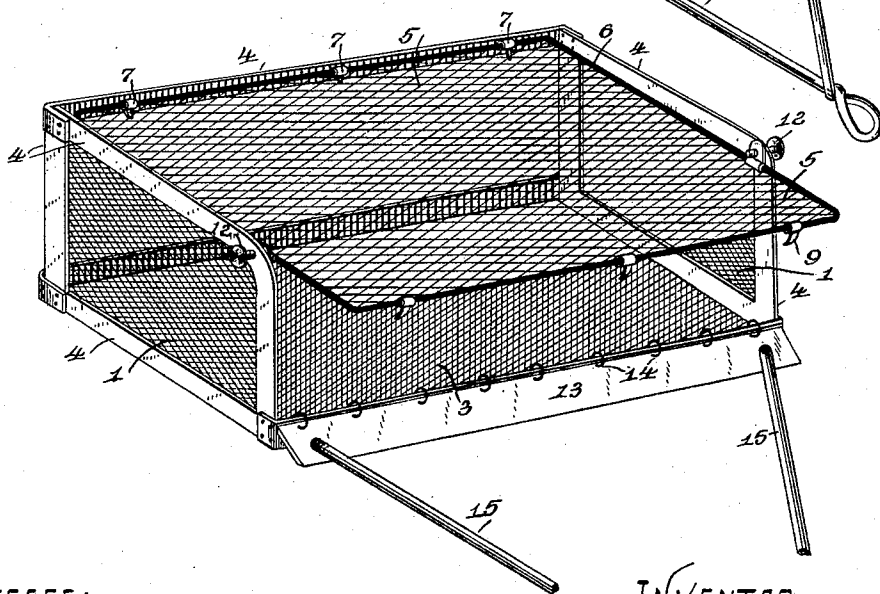


Fig. 2.



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Geo. D. Phillips.

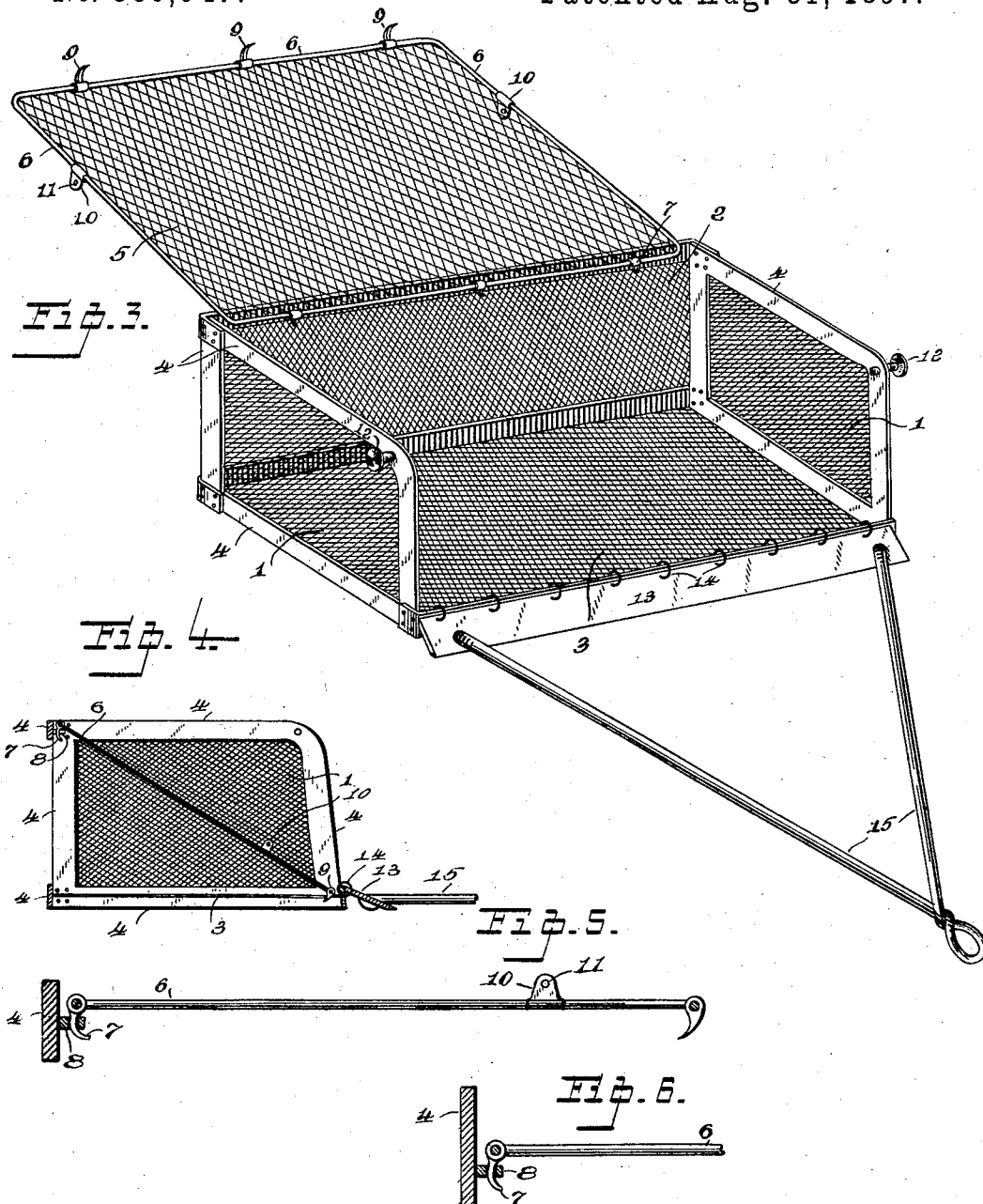
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UNITED STATES PATENT OFFICE.

THOMAS THOMAS, OF NEW HAVEN, CONNECTICUT.

COMBINED DRILL AND OYSTER DREDGE.

SPECIFICATION forming part of Letters Patent No. 589,047, dated August 31, 1897.

Application filed January 16, 1897. Serial No. 619,415. (No model.)

To all whom it may concern:

Be it known that I, THOMAS THOMAS, a citizen of the United States, and a resident of New Haven, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in a Combined Drill and Oyster Dredge, of which the following is a specification.

My invention relates to a device designed to rid oyster-beds of drills or borers, and it is also adapted to take up oysters and perform all the requirements of the ordinary dredge.

Of all the enemies of the oyster with which the oyster-planter has to contend none are so destructive, by reason of their size, and therefore difficult of capture, as the "oyster-drill," a small marine gasteropod that bores holes through the shell of the oyster. Heretofore all efforts to rid an oyster-bed of these pests has resulted in failure.

My device consists of a network structure provided with a forward blade adapted to raise objects from the ground and deposit them on a screen, the meshes of which screen will allow drills to pass through into the body portion or receptacle of the dredge, while oysters and other larger objects will be carried over the screen and fall on the ground back of such dredge.

To enable others to understand my invention, reference is had to the accompanying drawings, in which—

Figure 1 represents a perspective view of my improved dredge with the cover or screen dropped into an inclined position in readiness to catch drills. Fig. 2 is a perspective view of the dredge with screen elevated, in which condition the device is used to take oysters, also broken view of the draft-iron. Fig. 3 is a perspective view of the dredge with the screen thrown back. Fig. 4 is a cross-sectional view of the frame of the dredge and blade, end elevation of one end of said dredge, and one of the end frames of the screen in an inclined position, and broken view of the draft-iron. Fig. 5 is a detail end view of the screen-frame and sectional view of the upper rail of the dredge. Fig. 6 is a detail broken view of the screen-frame and sectional view of the upper rail of the dredge.

Its construction and operation are as follows:

The dredge shown is a rectangular-shaped construction, whose ends 1, back 2, and bottom 3 are made of wire-netting, bounded by the iron frame 4.

5 is the wire screen, bounded by the rectangular frame 6. This screen is detachably hinged to the upper rail of the frame of the back 2 by means of the projections 7, Figs. 4, 5, and 6, inserted in the lugs 8 of such upper rail.

9 are claws mounted on the forward part of the screen to engage with the network of the bottom of the dredge, Fig. 4, and thus prevent the screen being forced back under the weight of a body of oysters.

10 are ears mounted upon the ends of the screen-frame, and they are provided with the hole 11 to receive the ends of the threaded bolts 12, which bolts are inserted in threaded holes of the end frame of the dredge. This arrangement is used to maintain the screen in an elevated position when the dredge is used for the purpose of catching oysters.

13 is the blade fastened to the lower forward rail of the dredge-bottom by means of the rings 14.

15 is the draft-iron, attached to such blade.

In operating the device the screen is elevated, as shown at Fig. 2, and the dredge thrown over and a haul made for oysters in order to see their condition. If the work of drills appear, then the screen is lowered, as shown at Fig. 1, and the dredge returned to the bed, assuming, when in operation, the position as shown. The blade 13 will scrape the surface of the ground clean of every kind and quality of material. The stones, oysters, and other matter too large to pass through the screen will be carried up the incline and over the back of the dredge by the force of the water, while the drills will fall through the screen into the dredge and will remain there, as the meshes of the dredge-body are smaller than the drills, and from which they can be dumped out and destroyed when the dredge is hauled aboard. As the drills are heavy and pointed and the mesh of the screen is fully large enough to take in full-grown drills, which are about one inch in length, it

will readily be seen, and which has also been practically demonstrated, that they will all pass through the screen before they reach the top of the incline.

5 If required, the back rail of the dredge-frame may extend above the screen, as shown at Fig. 6, so as to hold any of the drills that may have passed over the screen and reached this point long enough to allow them to fall
10 through said screen at this point, but it is extremely doubtful if any drills will be able to reach this point.

It will be understood that the size of the mesh of the screen will vary according to the
15 ground to be worked. When the oysters are two or three years old, or more, the mesh can be made larger and reduced for smaller oysters, always, however, maintaining a mesh large enough to catch full-grown drills. For this
20 purpose the screens are made readily attachable and detachable from the dredge, as shown and previously described. This device—*i. e.*, the woven-wire holding-receptacle—can be attached to an ordinary oyster-dredge, in
25 which case the screen would be elevated and the wire receptacle would take the place of the bags now used for holding the oysters that pass over the blade of the ordinary dredge, in which case, also, the blade of the wire
30 holding-receptacle could be dispensed with.

It will be observed that the screen, sides, and bottom of my device are made of woven wire. This is done because this material is cheaper and easy to obtain; but it will be
35 understood, however, that perforated-metal plates can be substituted for such woven wire, and I hold myself at liberty to do so, without departing from the spirit of my invention. Also, if found desirable, more than one screen
40 can be used. Also the inclination of the screen may be changed without departing from the spirit of my invention, the gist of which consists in a dredge for removing drills from oyster-grounds by lifting the drills and
45 other matter from the surface of the ground and passing such matter over a screen, the oysters and other matter passing over the screen, while the drills fall through the same and into a receptacle for that purpose.

50 The object of making the sides of my dredge of woven-wire netting is that the water will readily pass through the dredge and not retard it.

The device as above described is cheap and

effectual for the purpose required, and it will
work equally as well on a mud bottom as a hard one.

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

1. The combination, in a dredge of the character described, of a holding-receptacle and a screen overlying such receptacle adapted to retard drills and other objectionable matter and deposit them into the receptacle, and
65 permit larger bodies to pass freely over the said screen, for the purpose set forth.

2. The combination, in a dredge of the character described, of a holding-receptacle and a screen overlying the same, and a blade or
70 scraper to remove objects from the ground so that they may be deposited on the screen for the purpose described and set forth.

3. The combination, in a dredge, of the character described, of an open-work holding-receptacle, an inclined open-work screen of larger mesh adapted to close the mouth of such receptacle, a blade forward of said receptacle so that objects may be removed from the surface of the ground by such blade and
80 be deposited on the said screen, the larger objects passing over while the smaller ones—like drills &c.—are forced through the mesh of the said screen into the receptacle, for the purpose set forth.

4. The combination, in a dredge, of the character described, of a network receptacle, an overlying network screen of larger mesh than the receptacle, said screen adapted to be readily attached to and be detached from said receptacle, means whereby said screen can be
90 maintained in an elevated position, a forward blade adapted to scrape the surface of the ground, removing oysters, drills &c., therefrom which are passed over the said screen
95 by the forward movement of the dredge when the said screen is in an inclined position, the drills and other small matter passing through the screen into the receptacle, while the larger objects will be deposited back of said dredge,
100 as described and for the purpose set forth.

Signed at Bridgeport, in the county of Fairfield and State of Connecticut, this 6th day of January, A. D. 1897.

THOMAS THOMAS.

Witnesses:

A. J. TANNER,
M. J. KEANE.