

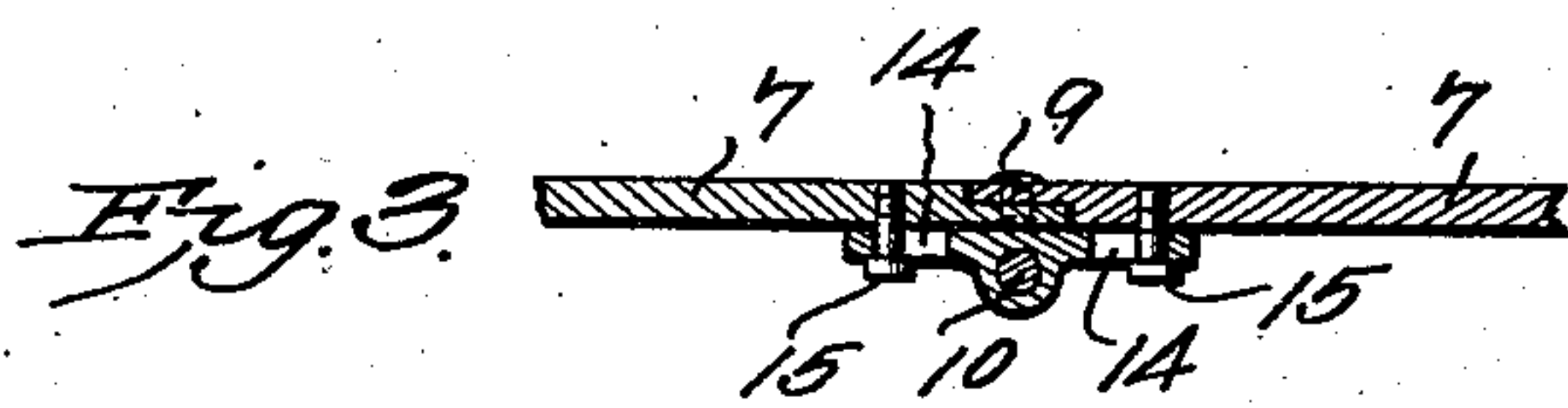
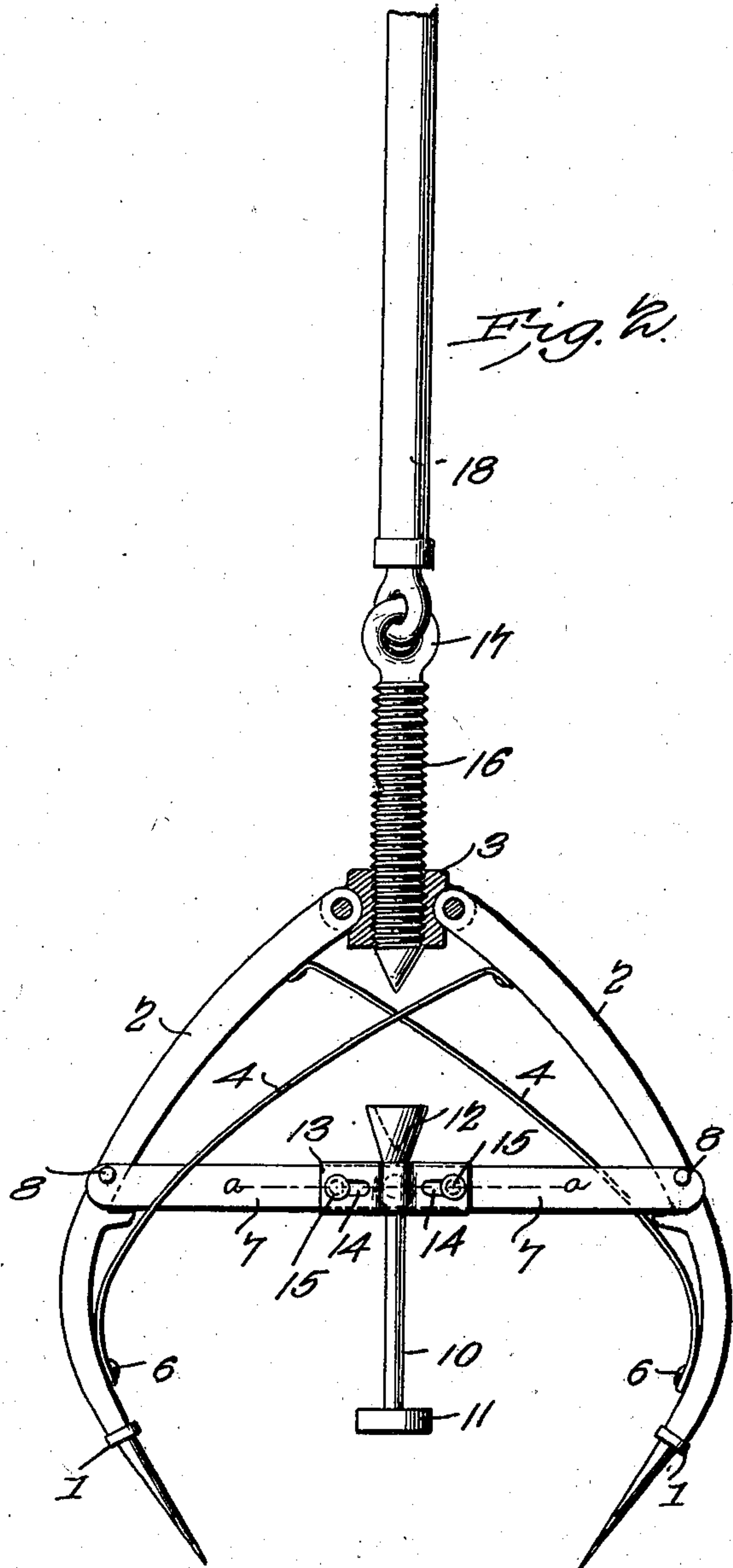
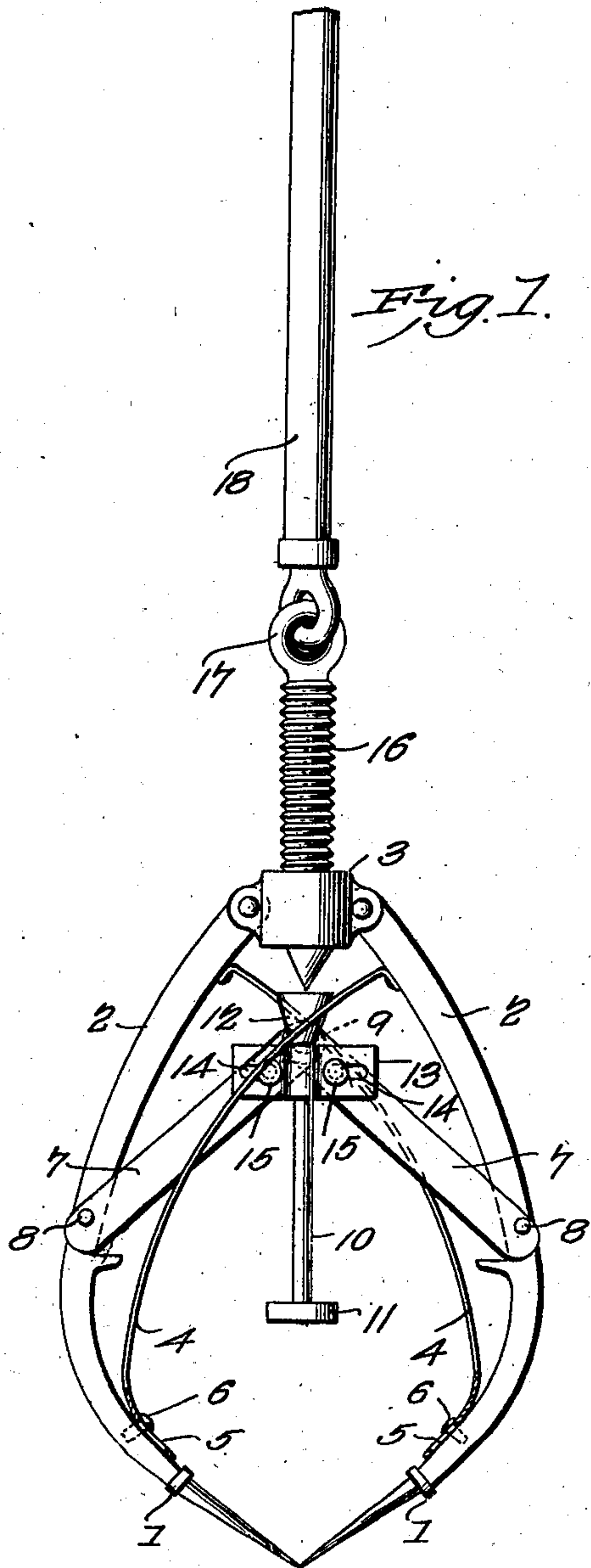
No. 702,104.

Patented June 10, 1902.

M. LAWRENCE.
OYSTER TONGS.

(Application filed Nov. 6, 1901.)

(No Model.)



Witnesses
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UNITED STATES PATENT OFFICE.

MITCHELL LAWRENCE, OF CHESTER, MARYLAND.

OYSTER-TONGS.

SPECIFICATION forming part of Letters Patent No. 702,104, dated June 10, 1902.

Application filed November 6, 1901. Serial No. 81,334. (No model.)

To all whom it may concern:

Be it known that I, MITCHELL LAWRENCE, a citizen of the United States, residing at Chester, in the county of Queen Anne and State of Maryland, have invented a new and useful Oyster-Tongs, of which the following is a specification.

My invention is an improved oyster-tongs; and it consists in the peculiar construction and combination of devices hereinafter fully set forth and claimed.

The object of my invention is to effect improvements in the construction of the tongs whereby the same are automatically operated to close the jaws or members thereof when the same are lowered on a bed of oysters and are not operated when they are lowered on mud or sandy bottoms where there are no oysters, thus saving the labor of hoisting the empty tongs to the surface to reset them when there has been no catch.

In the accompanying drawings, Figure 1 is a side elevation of an oyster-tongs embodying my improvements. Fig. 2 is a vertical sectional view of the same. Fig. 3 is a detail section taken on a plane indicated by the line *a a* of Fig. 2.

In the embodiment of my invention the jaws or members 1 of the tongs are respectively carried by curved levers 2, the upper ends of which are pivotally connected to opposite sides of a nut 3. I here show a pair of springs 4, which are disposed between and connected at their extremities to said levers 2 to normally draw the same toward each other and close the jaws of the tongs. The upper ends of the said springs are fixedly secured to the said levers, and the lower ends thereof are slidably connected to the levers, said springs having slots 5 in their lower ends which are engaged by studs or pins 6, which project from the inner sides of the levers and operate in the said slots. Within the scope of my invention, however, any suitable form of spring or springs may be employed for closing the jaws of the tongs, and I do not limit myself in this particular.

A pair of toggle-links 7 have their outer ends respectively connected pivotally to the

levers 2, as at 8, the inner ends of the said toggle-links being pivotally connected together, as at 9. A trip element 10, which is here shown as a vertical rod having a foot 11 at its lower end and having a head 12 at its upper end, is attached to a bar 13, which is provided at its ends with longitudinal slots 14. Screws or studs 15, which connect the said bar 13 to the toggle-links 7, operate in the slots 14 of said bar.

A set-screw 16, which is of suitable length, operates in the nut 3 and is provided at its upper end with an eye 17, to which is attached the lower end of a pole 18, by means of which the tongs may be raised and lowered and by means of which the screw may be rotated to cause it to travel in the nut 3 to adjust the said screw with relation to the trip element. The pole 18 is flexibly connected to the set-screw to enable the pole to be disposed at any necessary angle with relation to said screw, according to the nature of the oyster-bed as to its being level or undulating or inclined.

The operation of my improved oyster-tongs is as follows: The screw 16 is turned by means of the pole 18 and caused to move downwardly in the nut 3 and by engagement with the head of the trip element move the latter, and hence the inner ends of the toggle-links 7, downwardly to dispose the said toggle-links in the same plane, and thereby move the levers 2 and the jaws 1 outwardly against the tension of the springs 4, hence opening the tongs in position to be lowered on the oyster-bed which it is desired to dredge. The tongs are then lowered by the pole, and if they descend upon oysters the latter arrest the descent of the trip element 10, and the screw 16 having been previously elevated to allow the said trip element to move upwardly the latter by its upward movement with relation to the other parts of the tongs, which continue to descend, moves the toggle-links upwardly a slight distance past the dead-centers of the screws or pins 15, whereupon the springs act to close the tongs on the oysters, as will be understood. In the event that the tongs are lowered on barren mud or sand, where there are no oysters, the bottom offers no obstruction to the

settling of the trip element 10, together with the other parts of the tongs, and hence the latter are not closed.

It will be understood that my improved tongs need only to be raised to the surface when oysters have been taken thereby, thus greatly reducing the labor of dredging.

Having thus described my invention, I claim—

1. In combination with the jaws or members of an oyster-tongs, a spring to open the same, a depending trip element, connections between the latter and said members of the tongs, to open the latter against the tension of said spring, and means to set said trip element, substantially as described.

2. In combination with the jaws or members of an oyster-tongs, a spring to open the same, a depending trip element disposed between said members, flexible connections between said trip element and said members, to hold the latter open against the tension of said spring, means to raise and lower the tongs, and a set element, operated by said raising and lowering means, to set said trip element, substantially as described.

3. In combination with the jaws or members of an oyster-tongs, a spring to open the same, a vertically-movable depending trip element, disposed between said members, flexible connections between said trip element and said members to hold the latter open against the tension of said spring, a nut, a set-screw therein, to set said trip element, and means to hoist and lower said tongs, said hoisting

and lowering means being connected to said set-screw, and adapted to be used for rotating the latter, substantially as described.

4. In combination with the jaws or members of an oyster-tongs, a spring to open the same, a vertically-movable depending trip element, disposed between said members, flexible connections between said trip element and said members to hold the latter open against the tension of said spring, a nut, a set-screw therein to set said trip element, and a pole connected to said set-screw, and adapted to be used for rotating the latter, substantially as described.

5. In combination with the members of an oyster-tongs, a nut to which said members are pivotally connected, a spring to normally close said members, toggle-links, connecting said members, a trip element, carried by said toggle-links and depending therefrom, a set-screw, operating in the said nut, and coacting with said toggle-links and trip element, to open said members against the tension of said spring, and a pole to hoist and lower said tongs, said pole being connected to and adapted to be used for turning said screw, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

MITCHELL LAWRENCE.

Witnesses:

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