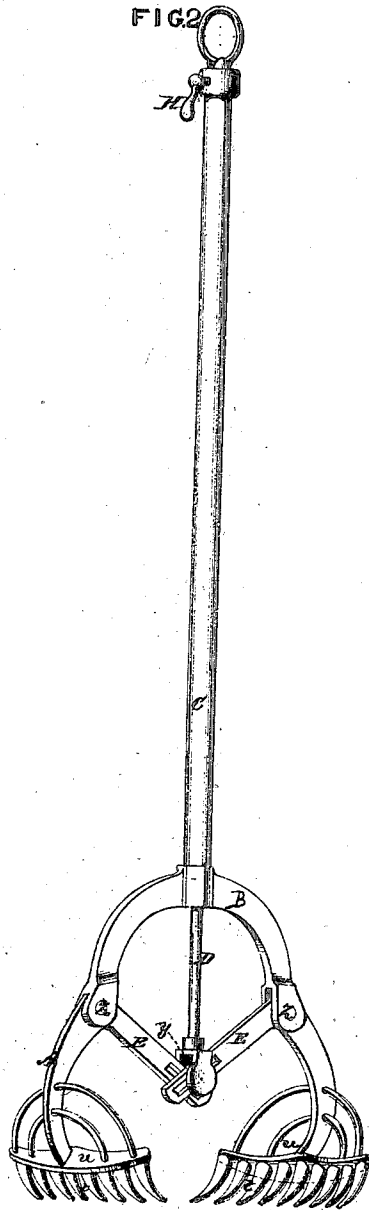
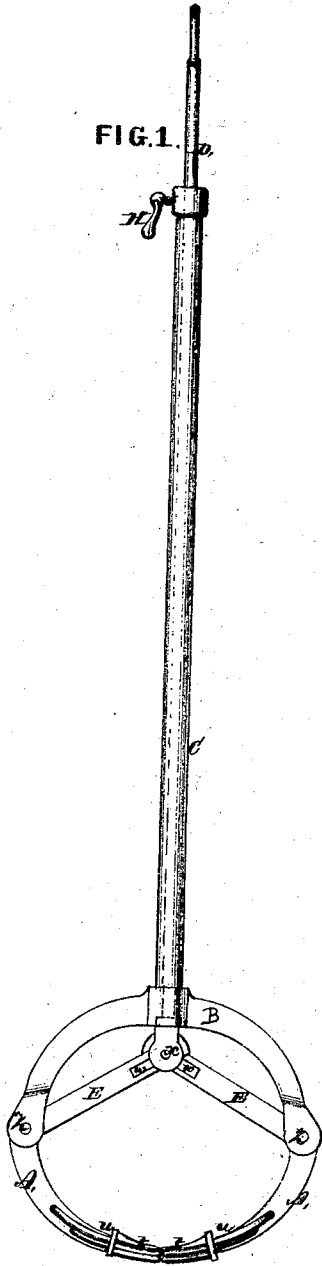


C. A. Scanlan, 2. Sheets, Sheet 1.

Tredger.

No. 102,049.

Patented Apr. 19, 1870.



Witnesses  
H. B. Deming.  
Wm. H. Barrett, Jr.

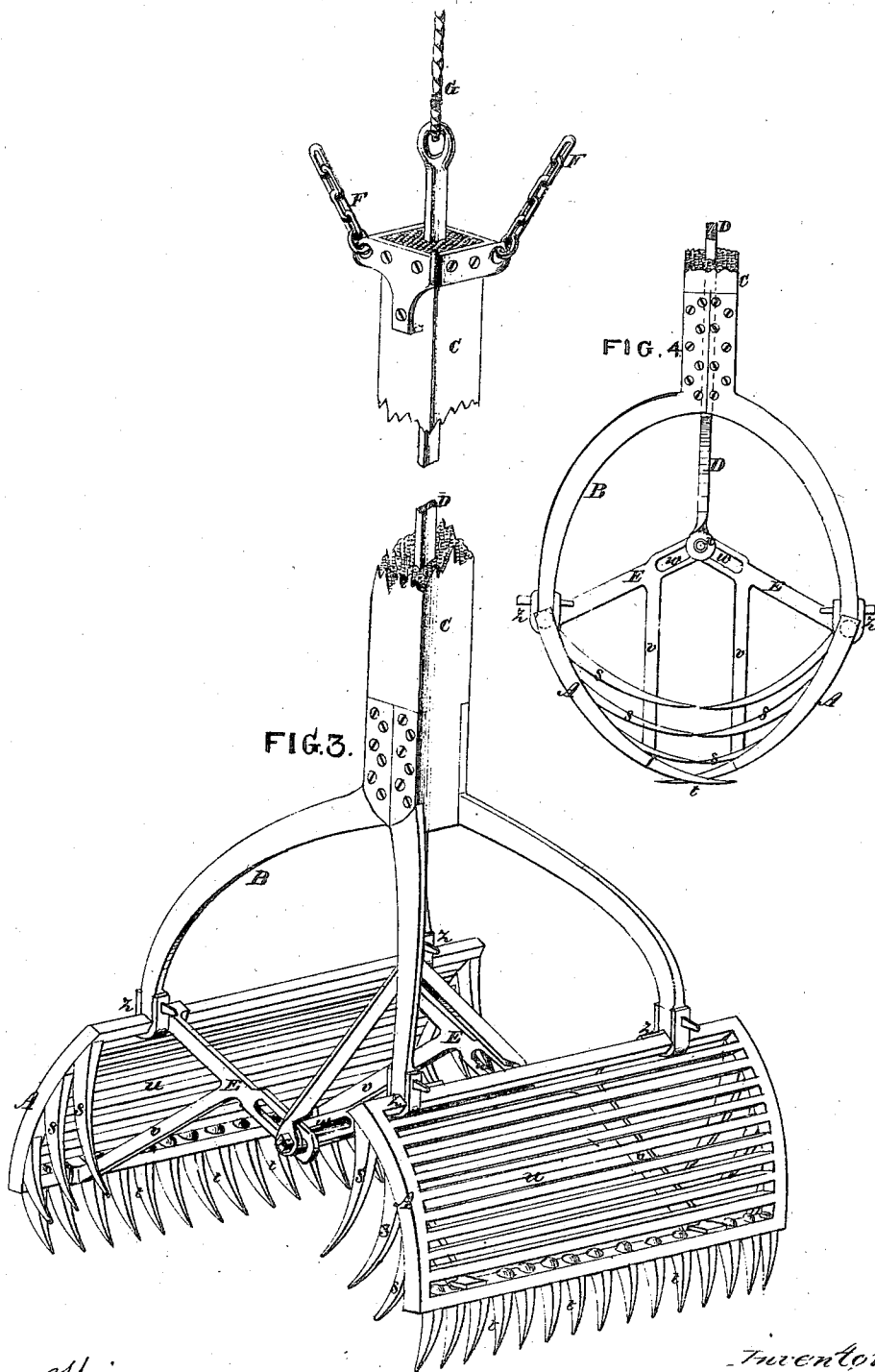
Inventor  
C. A. Scanlan.  
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C. A. Scanlan, 2 Sheets, Sheet 2.

Dredger.

No. 102049.

Patented Apr. 19, 1870.



Witnesses  
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Wm. H. Brewster

Inventor:  
C. A. Scanlan  
by Knight & Bass  
Attorneys

# United States Patent Office.

CHARLES A. SCANLAN, OF CHARLESTON, SOUTH CAROLINA.

Letters Patent No. 102,049, dated April 19, 1870.

## IMPROVEMENT IN DREDGING APPARATUS.

The Schedule referred to in these Letters Patent and making part of the same.

I, CHARLES A. SCANLAN, of Charleston, in the district of Charleston and State of South Carolina, have invented a new and useful Dredging Apparatus, which is described as follows:

### Nature and Objects.

My apparatus is designed for the recovery of lost articles from the beds of rivers, &c., for gathering oysters, removing phosphate deposits and obstructions, and other similar uses. It consists in a complete form of a pair of pivoted toothed jaws or rakes, forming, when closed together, a basket; an arched frame for the attachment of said jaws, provided centrally with a tubular stem or standard, by which to raise and lower it; a rod sliding within said tubular stem, by which to actuate the rakes; and slotted arms or levers on the rakes, for the attachment of said rod, and is to vary in size, and be adapted for operation by either hand or machinery, as required.

### General Description.

In the accompanying drawings—

Figure 1 represents an elevation, and

Figure 2, a perspective view of an illustrative form of my apparatus adapted for hand use.

Figures 3 and 4, respectively, a perspective view and an elevation of the apparatus as adapted for heavy work, and for operation by machinery.

Figs. 2 and 3 represent the position of the parts in the open condition of the jaws, and 1 and 4, the same in their closed condition.

Similar letters of reference indicate like parts in the several figures.

A A in the drawings represent a pair of jaws or rakes of suitable form and material, and adapted to form, when brought together, a basket or receptacle of proper capacity.

B represents an arched frame, adapted for the attachment to its extremities, by hinge-joints *z*, of the rakes A, being of single thickness, as represented in figs. 1 and 2, or bifurcated, so as to afford more lateral support, as represented in fig. 3, as required.

C represents a tubular stem or standard, attached centrally to the frame B, for raising, lowering, and holding the rakes.

D represents a rod, working within the tubular stem C, for opening and closing the rakes.

E E represent rigid arms or levers, provided on the inner sides of the rakes for the attachment of the rod D.

*y* represents a recess in the lower end of the rod D;

*x*, a pin or bolt traversing the same; and *w w*, slots in the arms E for the reception of said pin, which forms the attachment of the rod.

The stem C and rod D, with rakes of suitable capacity, may be adapted to be manipulated by hand, as

represented in figs. 1 and 2, or, for heavier work, be connected, in use, by chains or ropes F G, to suitable machinery for operating them. In the former case, at least, where it is very convenient, I propose applying to the stem, at its upper end, a clamp-screw, H, or its equivalent, by which to hold, through the rod D, the rakes in their open and closed positions.

Said rod and stem will both usually be of metal.

In large apparatus, such as represented in figs. 3 and 4, the latter may be made of wood, as indicated; and for hand-rakes, such as represented in figs. 1 and 2, gas-pipe may be employed to good advantage to form said part.

A longitudinal groove or other means for guiding the rod may render the tubular form of stem unnecessary.

One or a pair of the arms or levers E may be employed on each rake, as required, and, when necessary, the same may be strengthened by braces *v*, as represented in figs. 3 and 4.

For a pair on each rake, the rod D will, of course, be bifurcated at its lower end, as represented.

The rakes A are of variable construction. I prefer to construct them for hand-rakes of the simple form represented. For larger apparatus, the heads *u* may be extended and grated, and, in addition to the usual teeth *t*, supplementary ones, *s*, at the ends, closing the same when the rakes are brought together, may be employed to assist in retaining the load, as represented.

For dredging bedded formations which require to be broken from the bottom, the teeth will be made of steel and chisel-shaped, so as to bear the requisite thrust into the mass to disengage it. The weight of the stem, actuating-rod, chains, &c., above the basket, enable great force to be applied to it for this and similar purposes.

### Claims.

I claim as new—

1. The combination, in a dredging apparatus, of a pair of pivoted rakes, A A, a frame B, for the attachment of said rakes, provided with a stem or standard, C, a rod, D, for working the rakes, and arms or levers, E, on the rakes, for the attachment of said rod, substantially as herein set forth, for the purposes shown.

2. In the described combination, with the rakes A, levers E, frame B, stem or standard C, and rod D, of a dredging apparatus of the description set forth, the clamp-screw H, or its equivalent, for the purpose stated.

C. A. SCANLAN.

Witnesses:

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R. A. TAVEL.