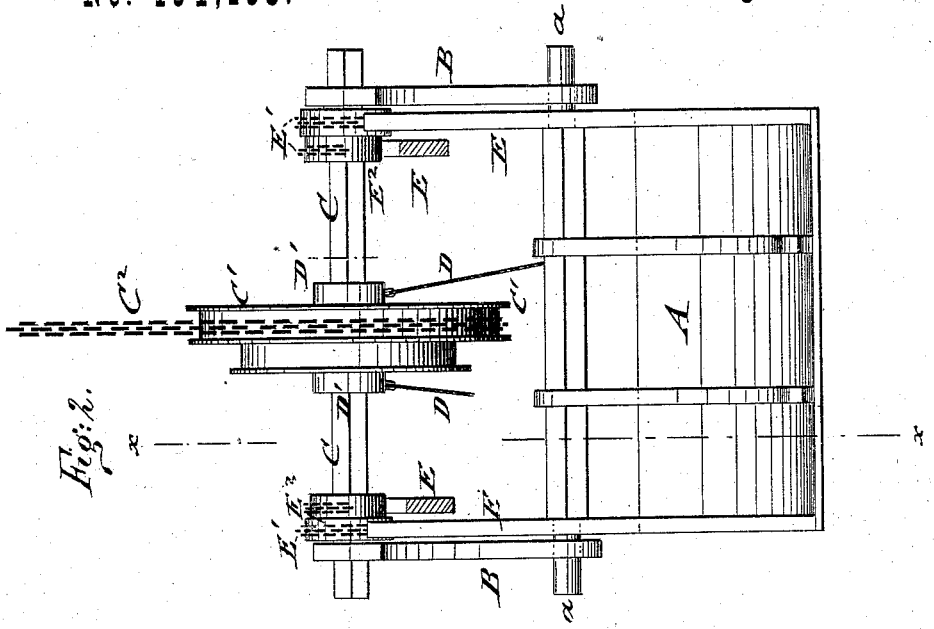
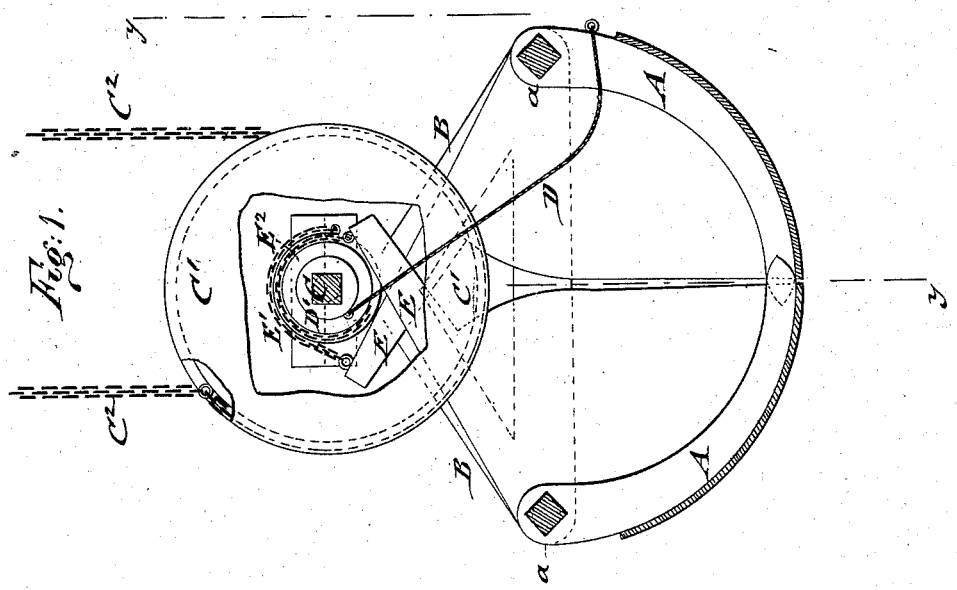
J. McKEEVER.

DREDGING-BUCKETS.

No. 194,163. Patented Aug. 14, 1877.




WITNESSES:

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# UNITED STATES PATENT OFFICE.

JOHN McKEEVER, OF JERSEY CITY, NEW JERSEY.

## IMPROVEMENT IN DREDGING-BUCKETS.

Specification forming part of Letters Patent No. **194,163**, dated August 14, 1877; application filed June 18, 1877.

*To all whom it may concern:*

Be it known that I, JOHN McKEEVER, of Jersey City, county of Hudson, and State of New Jersey, have invented a new and Improved Dredge-Bucket, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a vertical longitudinal section on line *x x*, Fig. 2, of my improved dredging-bucket; and Fig. 2, a vertical transverse section of the same on line *y y*, Fig. 1.

Similar letters of reference indicate corresponding parts.

This invention relates to improvements in dredging-buckets, by which they may be worked with great facility in opening and closing; and it consists of bucket-sections swinging by fixed lateral pivots in triangular side frames, which support at their apexes the operating-shaft. The turning of the operating-shaft in one direction or the other opens or closes the bucket-sections by pulley and cord or chain connection, they being stopped at the outermost position by means of chains attached to the ends of lever-arms, and winding upon pulleys of the shaft for closing the bucket.

By reference to the drawing, A A are the bucket-sections, which are hung by fixed lateral pivots *a* to the lower corners of triangular frames B, which support in suitable bearings at the apexes the operating-shaft C. The shaft C is revolved in one direction or other opposite one by a grooved center wheel, C′, to which two chains, $c^2$, are attached, which wind in opposite directions on the wheel, the motion of the wheel and chains being controlled in suitable manner from the hoisting mechanism on the dredging-vessel.

The bucket-sections A A are connected by chains with the pulley D′ of the operating-shaft, the chains being attached to the sections below the pivot-shafts, to impart the required swinging motion for opening the bucket-sections. The chains D wind upon pulleys D′, which are arranged on both sides of the center wheel C′, and unwind, for admitting the closing of the sections, when the shaft C is turned in opposite direction. The side plates of the bucket-sections are extended upwardly to form lever-arms E, to the outer ends of which chains $E^1$ are attached, which wind in opposite directions on grooved wheels $E^2$ at the end of shaft C, and cause thereby the closing of the bucket-sections until the lever-arms form contact with their wheel.

The bucket-sections are allowed to open only to a width corresponding to the lengths of the chains. When the operating-shaft is turned to open the bucket, the center chains are wound up and the side chains unwound, while by closing the bucket the center chains are unwound and the side chains wound up, so as to change in this manner the bucket and raise and discharge the same, being then lowered and closed for taking up the next charge of mud, and so on, forming a dredging-bucket of effective and quick construction.

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

The fixed triangular frames B and the rotary shaft C, having pulleys C′ D′, in combination with swinging bucket-sections A, having rigid arms connected with pulleys D′, as and for the purpose specified.

JOHN McKEEVER.

Witnesses:

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