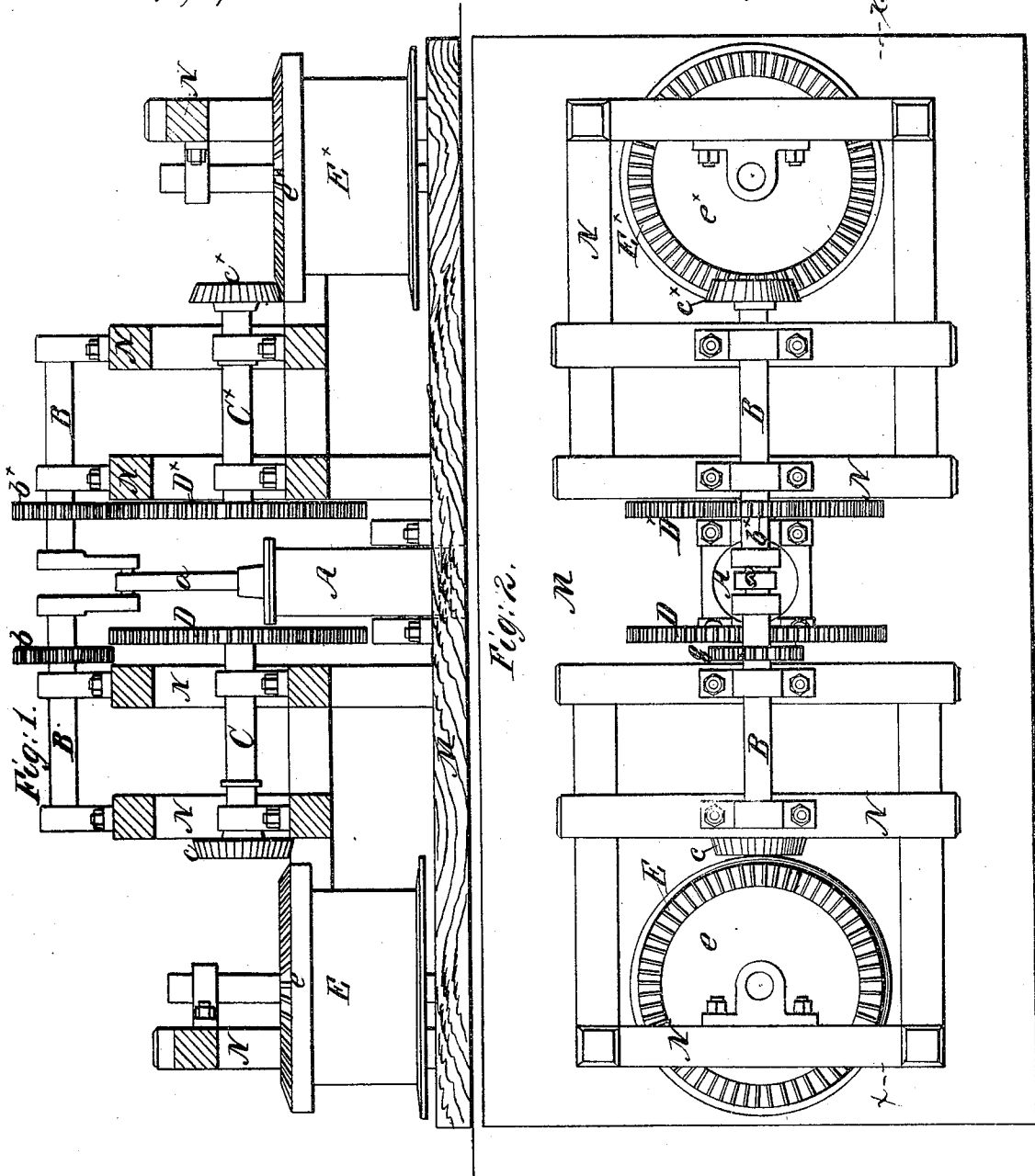


P. M. Warren.

Steam Engine and App's for Hauling Seine.

N^o 89,717.

Patented May 4, 1869.



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PETER M. WARREN, OF EDENTON, NORTH CAROLINA.

Letters Patent No. 89,717, dated May 4, 1869.

IMPROVEMENT IN STEAM-ENGINERY FOR SEINE-HAULING.

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

To all whom it may concern:

Be it known that I, PETER M. WARREN, of Edenton, in the county of Chowan, and in the State of North Carolina, have invented a new and useful Improvement in Apparatus for Hauling Seines; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

• Figure 1 represents a longitudinal section, taken in line *x x*, fig. 2.

Figure 2 represents a plan view of the apparatus.

Like letters denote like parts in the several figures.

The nature of my invention consists in providing an apparatus with two upright revolving drums, which alternately haul in the hauling-lines of a seine, as hereinafter more fully explained.

To enable those skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

A represents the oscillating cylinder of a steam-engine, its axle resting in two blocks, which are fastened to the platform M.

On the platform is mounted a frame-work, N N, as shown in the drawings.

The piston-rod, *a*, is attached to the horizontal crank-shaft B, which rests in blocks secured to the upper part of the frame, and is vertically over and on each side of the cylinder.

The crank-shaft carries two small pinion-wheels, *b* and *b*^x, one on each side of the crank.

C and C^x represent two intermediate horizontal shafts, which rest—one on each side of the cylinder—in blocks that are fastened to the frame-work about midway between the platform and the crank-shaft. They are perpendicularly under and parallel with the latter.

That end of the intermediate shaft C which is nearest the cylinder is provided with a large spur-wheel, D, and its other end with a small bevel-wheel, *c*.

The intermediate shaft C^x has similar wheels, D^x and *c*^x.

These shafts slide in their respective blocks independently of each other. When in the position of C^x, as shown in the figures, their spur-wheels work in and are revolved by the pinions of the crank-shaft. When in the position of C their wheels are out of gear and at rest.

E and E^x represent two upright revolving drums, upon which the hauling-lines of the seine are wound. They are pivoted on the platform equidistant from the cylinder, and in a line with the intermediate shafts.

Their top ends have bevel-wheels, *e* and *e*^x, secured to them, in which the bevel-wheels of the intermediate shafts work when they are in gear. The ungearing of the spur-wheels of the latter ungears at the same time their bevel-wheels from the bevel-wheels of the drums.

The design is to use two machines, the distance between them being about equal to the length of the seine, operating at the same time, each hauling in the lines attached to the ends of the seine till the latter reaches the shore.

I will describe the operation of one of the machines.

When the seine has been set in the usual manner, the hauling-line attached to the end opposite the machine is carried to shore, and then attached to the drum E^x.

The machine is now set in motion, revolving the drum E^x, and winding the hauling-line upon it.

When this drum is filled, the hauling-line is shifted to the drum E, which is now set in motion, hauling in the line. At the same time the wheels which give motion to the drum E^x are ungeared, and the latter comes to rest. The line is then unwound from it, and coiled in the boat, to be ready for a resetting of the seine. The process is continued until the seine reaches the shore.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In an apparatus for hauling seines, the drums E and E^x, with bevel-wheels *e* and *e*^x, in combination with bevel-wheels *c* and *c*^x, intermediate shafts C and C^x, spur-wheels D and D^x, and pinion-wheels *b* and *b*^x of the crank-shaft of a steam-engine, the whole constructed and arranged to operate substantially as described and set forth.

2. The drums E and E^x, driving-wheels and steam-engine, in combination with the hauling-lines of a seine, as herein described.

The above specification, signed by me, this day of _____, 18

PETER M. WARREN.

Witnesses:

THOS. W. GODWIN,