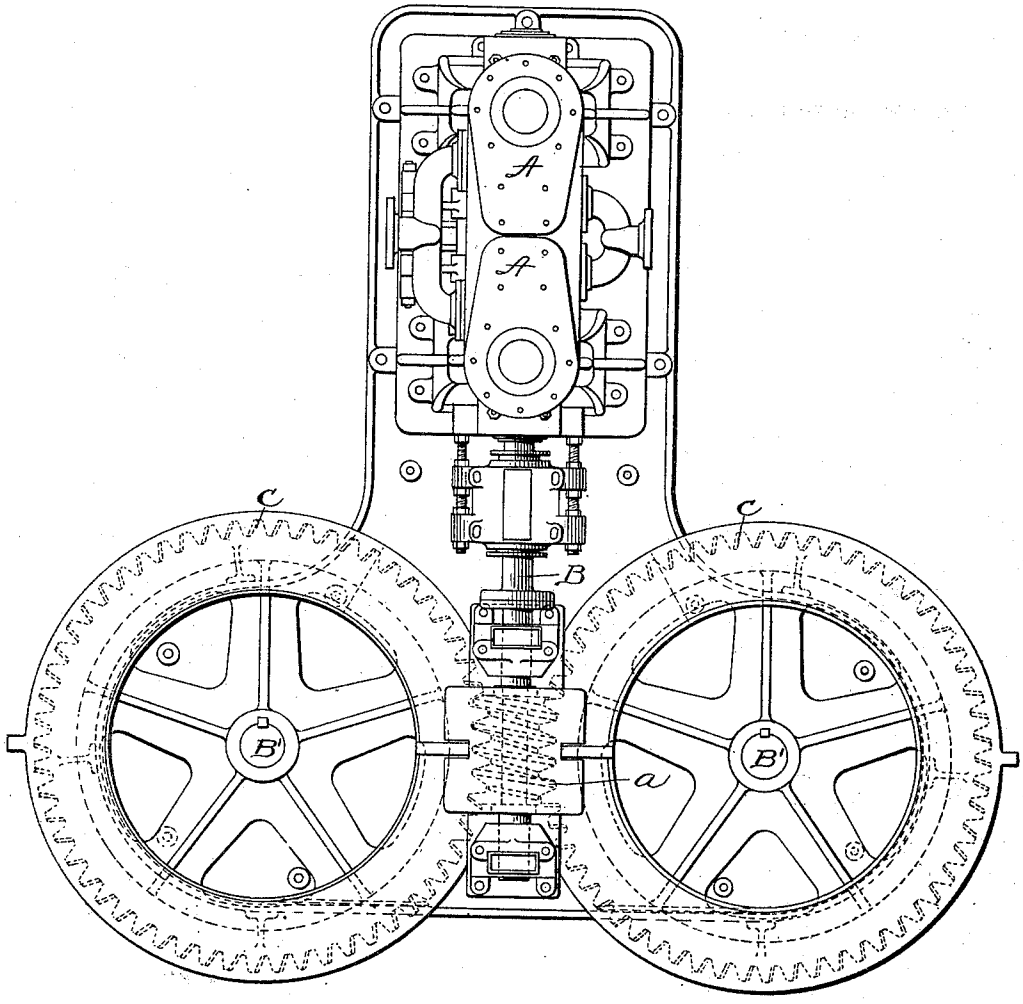
No. 695,994. Patented Mar. 25, 1902.

J. R. ANDREWS.

WINDLASS AND CAPSTAN AND MEANS FOR DRIVING SAME.

(Application filed Apr. 12, 1901.)

(No Model.)



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UNITED STATES PATENT OFFICE.

JACOB R. ANDREWS, OF BATH, MAINE, ASSIGNOR TO HYDE WINDLASS COMPANY, OF BATH, MAINE.

WINDLASS AND CAPSTAN AND MEANS FOR DRIVING SAME.

SPECIFICATION forming part of Letters Patent No. 695,994, dated March 25, 1902.

Application filed April 12, 1901. Serial No. 55,482. (No model.)

To all whom it may concern:

Be it known that I, JACOB R. ANDREWS, a citizen of the United States, residing at Bath, Maine, have invented certain new and useful Improvements Connected with and Relating to Windlasses and Capstans and the Means for Driving the Same, of which the following is a specification.

My invention relates to power-capstans, the object of it being to simplify the construction and afford an arrangement by which two power-capstans may be driven from the same worm-gear which is placed upon the crank-shaft of the engine or engines. In this way I provide a pair of capstans placed at convenient distances conveniently adapted to the work which they have to perform upon the ship and at the same time simplify the construction, so that the number of parts is less than that in any apparatus of this class so far as I am aware.

My invention is illustrated in the accompanying drawing, in which the figure is a plan view showing the relative arrangement of the parts.

In the drawing the engines, which are vertically arranged, are shown at A. They are connected to a horizontal crank-shaft B, which at its end is provided with a worm *a*. The shafts of the two capstans, which are alike, are vertically arranged to carry capstans on their upper ends and turn in suitable bearings. They are shown at B', and each has keyed to it worm-gears *c*. These are arranged on opposite sides of the worm which is upon the crank-shaft, and each is operated by this same worm. The parts are perfectly balanced, and there is but one worm-shaft, which is at the same time a crank-shaft, and no bevel-gears are required, while the arrangement affords the convenience of two capstans without any additional driving mechanism excepting the worm upon the additional crank-shaft.

I am aware that it is not new to drive drums or shafts by worm-gears, and I am also aware that it is not new to place a worm upon a crank-shaft, but

What I claim as my invention is—

The horizontal crank-shaft connected with suitable driving-engines and provided with a worm in combination with worm-gears *c* on vertical capstan-shafts, one upon each shaft, the said worm-gears being arranged one on each side of the worm, and meshing therewith whereby the same worm upon the crank-shaft operates a pair of capstans, all the parts being constructed and arranged substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

JACOB R. ANDREWS.

Witnesses:
CHAS. S. BROWN,
L. P. WRIGHT.