

D. JANSSEN.
PORTABLE WINDLASS.

No. 190,594.

Patented May 8, 1877.

Fig. 1.

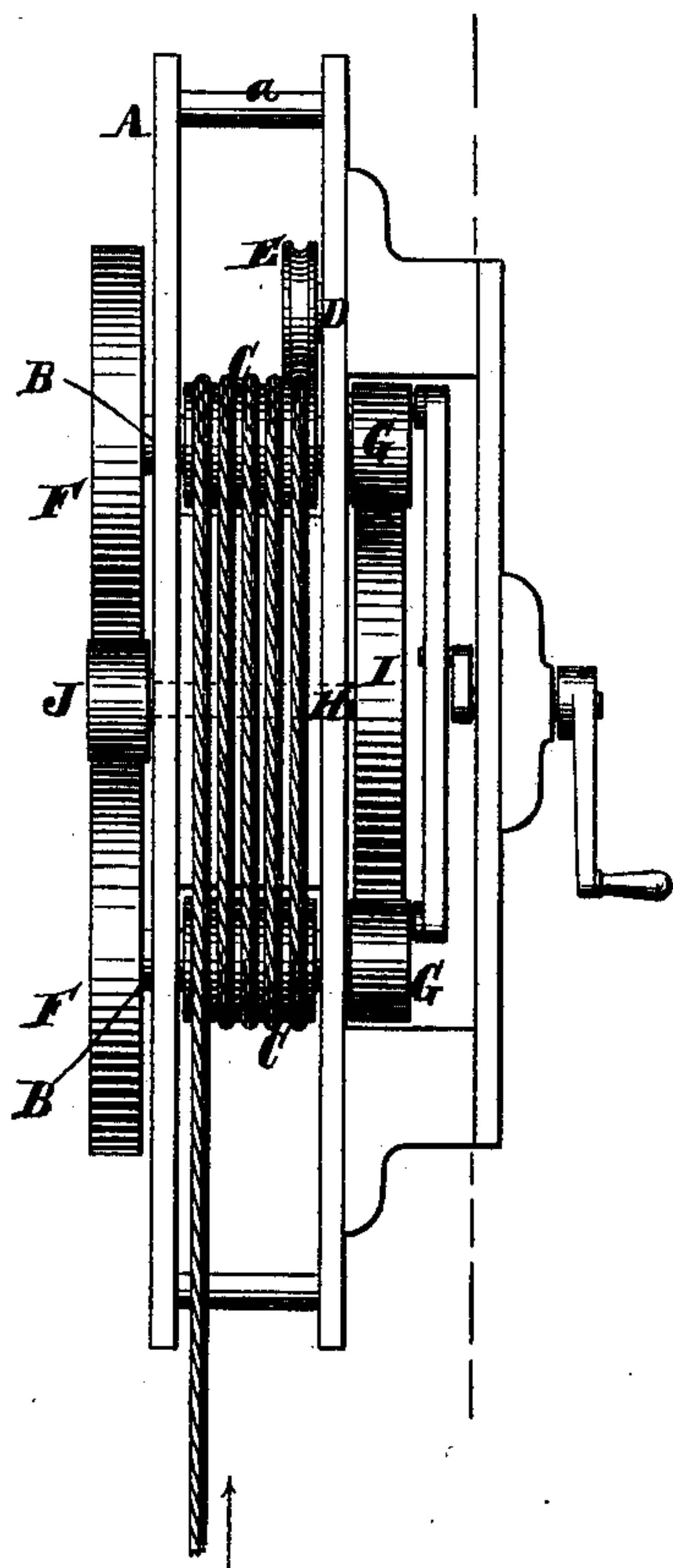
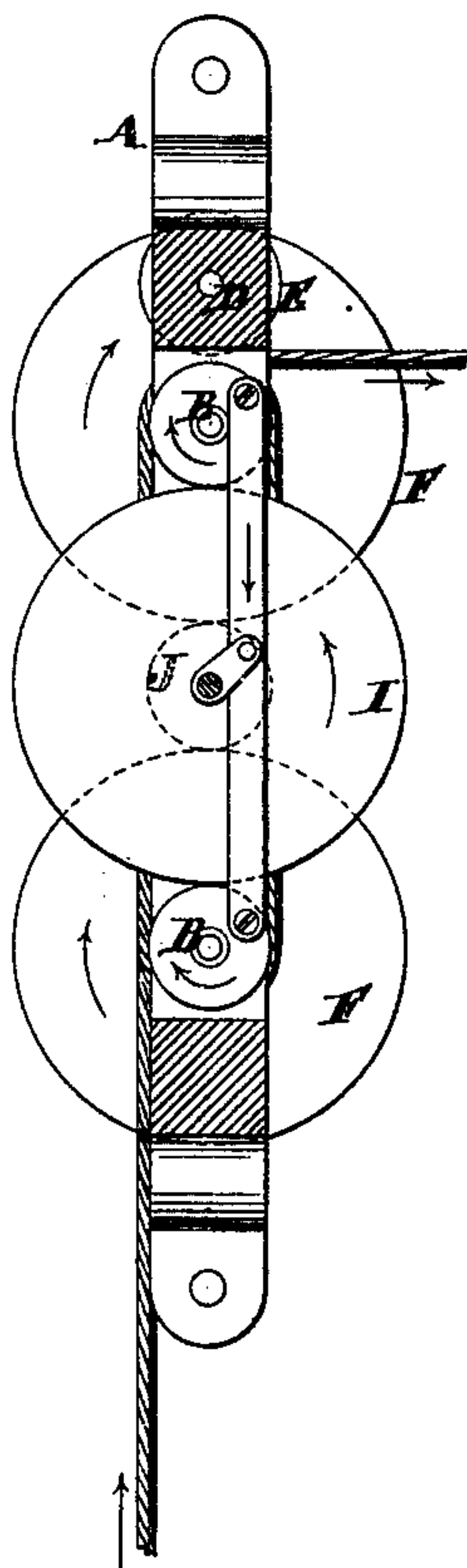


Fig. 2.



Witnesses.

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UNITED STATES PATENT OFFICE

DIEDRICH JANSSEN, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN PORTABLE WINDLASSES.

Specification forming part of Letters Patent No. 190,594, dated May 8, 1877; application filed April 4, 1877.

To all whom it may concern :

Be it known that I, DIEDRICH JANSSEN, of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Windlass, which invention is fully set forth in the following specification, reference being had to the accompanying drawing, in which—

Figure 1 represents a plan view of my windlass. Fig. 2 is a longitudinal section thereof in the plane of the line *x x*, Fig. 1.

Similar letters indicate corresponding parts.

My invention relates to a windlass, which is designed for use on ships in lieu of the usual capstan for hoisting, and for other purposes; and it consists in two independent sheaves, which are mounted on parallel shafts in a suitable frame, and geared together, and with which is combined a pressure-roller, also mounted on a suitable shaft in said frame, in close proximity to one of the sheaves, in such a manner that, if a rope is drawn over the two sheaves, and its free end is passed between said pressure-roller and the adjacent sheave, and a revolving motion is imparted to the two sheaves, the rope is drawn in over the sheaves with great force.

It consists, also, in certain means for gearing the two independent sheaves together—namely, a series of friction-wheels mounted, respectively, on each end of the shafts of the two sheaves, and on each end of a supplemental shaft, in such a manner that, by the strain of the rope which is drawn over the sheaves, said friction-wheels are brought in close superficial contact with each other, while by their means great power can be applied to the sheaves for winding or drawing in the rope.

In the drawing, the letter A designates the frame of my windlass, forming the bearings for two parallel shafts, B B, on which are mounted sheaves C C. These sheaves C C are made of corresponding diameter, and they are provided with circular grooves, for the reception of a rope. The frame A forms also the bearing for a shaft, D, on which is mounted a pressure-roller, E, said shaft D being placed in such a position that this pressure-roller E is in close proximity to one of the sheaves C C, so that, when a rope is drawn

over the sheaves, and its free end is passed between the pressure-roller E and the adjacent sheave, and a revolving motion is given to each of said sheaves, the rope is drawn in over the latter, and passes out between said pressure-roller E and the adjacent sheave, as indicated in Fig. 2.

The sheaves C C are secured to their shafts B B, and to one end of each of said shafts are secured also friction-wheels F F. About midway between the two sheaves C C is arranged a supplemental shaft, H, to the opposite ends of which are secured friction-wheels I J, the wheel J being arranged to be in contact with the wheels F F.

Now, when a revolving motion is given to the wheel I, such motion is transmitted through the shaft H and the wheel J to the wheels F F, and thereby the sheaves C C are revolved in like directions. For the purpose of imparting motion to said wheel I, I make use of a mechanical movement of peculiar form, and which actuates two friction-wheels, G G, mounted loosely on the shafts B B, and which wheels G G are in contact with the wheel I, as shown in Fig. 1. The mechanical movement just referred to may form the subject of a separate application for a patent.

The several friction-wheels F F G G I J have plain faces, and revolve by frictional contact with each other, and it will be noticed that the greater the strain on the sheaves C C the more closely said wheels are brought in contact.

In order to insure contact between the friction-wheels, the shafts B B are intended to be mounted in sliding boxes, so that, by the strain of the hoisting-ropes on the sheaves C C, all the friction-wheels are held in close contact; or any similar means may be used to produce this effect. If desired, however, cog-wheels may be used in lieu of said friction-wheels.

In practice I intend to make the pressure-roller E adjustable by means of a set-screw, or subject the same or its shaft to the action of a spring, so that the extent of its pressure on the rope can be regulated.

If the hoisting-rope is secured to a beam overhead, and a man steps on the cross-bar *a* of the frame A, he can raise himself up by turning the handle.

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

1. A windlass constructed of two independent sheaves, C C, mounted on shafts B B, which are geared together, a pressure-roller, E, and a frame, A, the whole being combined and adapted to operate substantially as described.

2. The combination, with the two independent sheaves C C and their shafts B B, of a

supplemental shaft, H, and friction-wheels J F F, substantially as and for the purpose described.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 3d day of April, 1877.

DIEDRICH JANSSEN. [L. s.]

Witnesses:

W. HAUFF,

E. F. KASTENHUBER.