

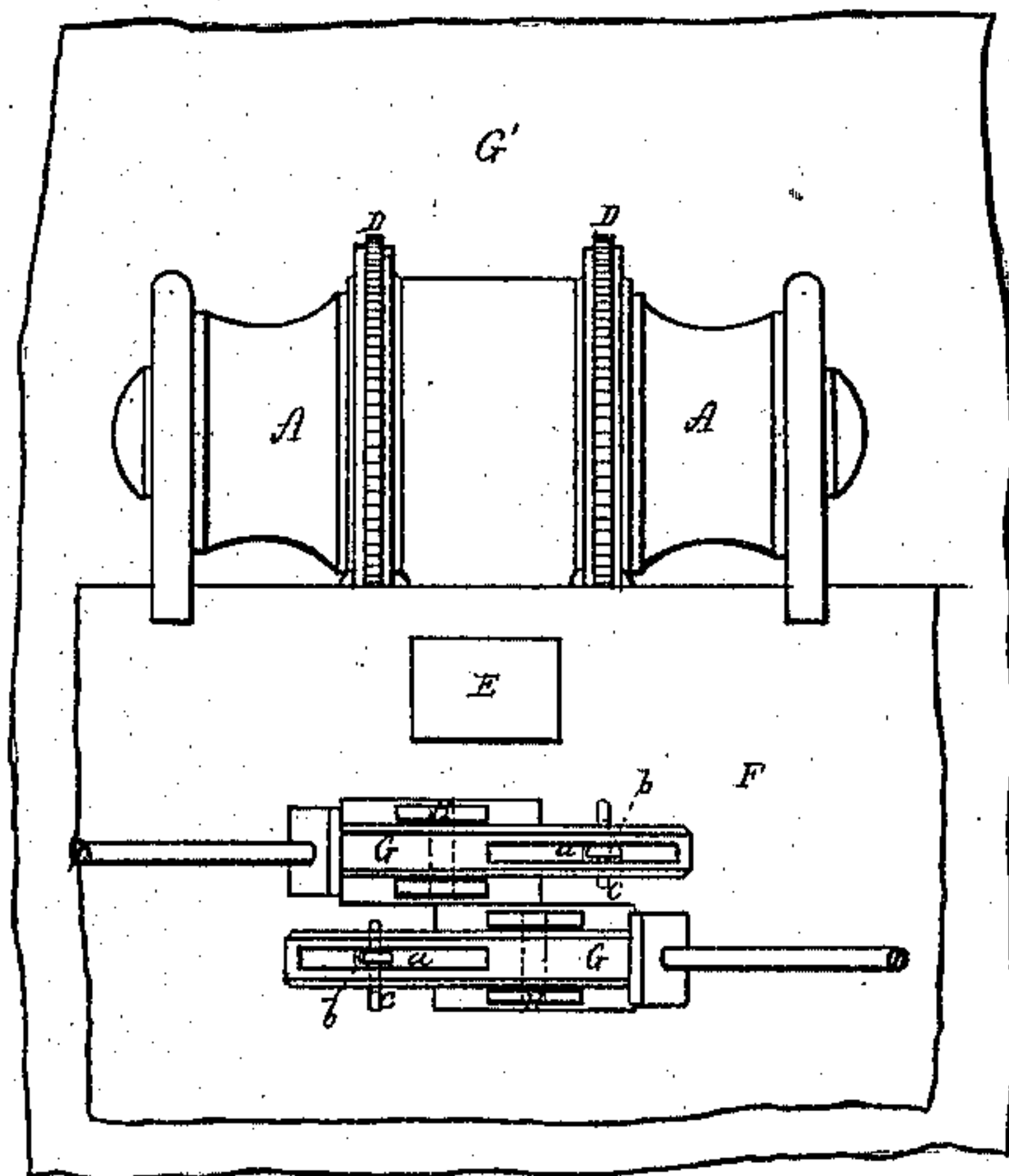
*A. Russell,*

*Windlass.*

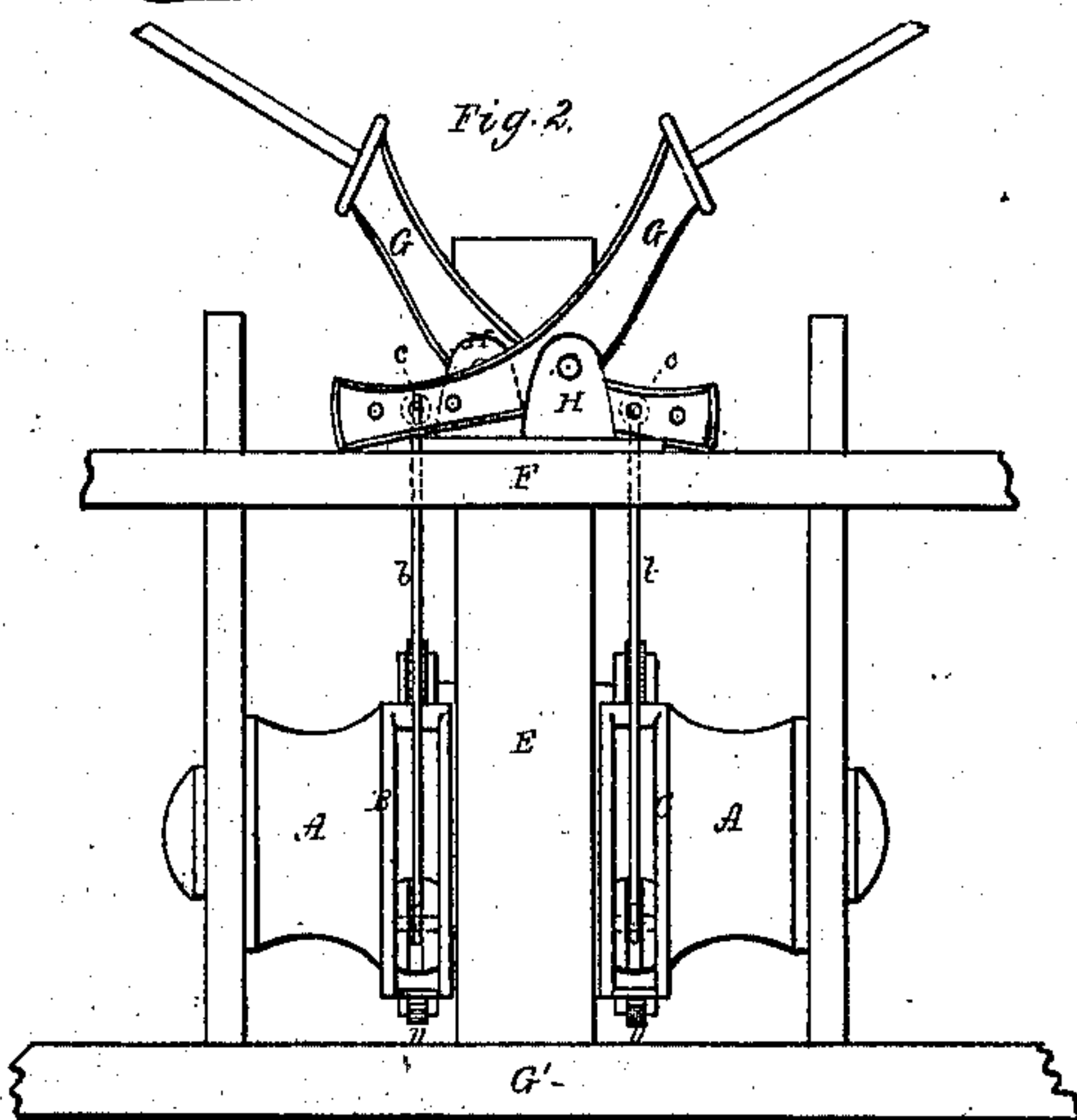
*No. 105,932.*

*Patented Aug. 2. 1870.*

*Fig. 1.*



*Fig. 2.*



Witnesses:

*S. N. Piper*

*J. Brown*

Albert Russell.

by his attorney.

*N. W. Wray*



# United States Patent Office.

ALBERT RUSSELL, OF NEWBURYPORT, MASSACHUSETTS.

Letters Patent No. 105,982, dated August 2, 1870.

## IMPROVEMENT IN WINDLASSES.

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

*To all persons to whom these presents may come:*

Be it known that I, ALBERT RUSSELL, of Newburyport, in the county of Essex and State of Massachusetts, have invented a new and useful Improvement in Machinery for Operating the Windlass of a Navigable Vessel; and I do hereby declare the same to be fully described in the following specification and represented in the accompanying drawing, of which—

Figure 1 is a top view, and

Figure 2, a side elevation of a windlass provided with my invention, the nature of which consists in a special arrangement and combination, in the manner as set forth, of two disconnected brakes or operative levers with the pawl-cases of the windlass.

In the drawing—

A denotes the windlass;

B and C, its two pawl-cases or working pawl-carriers; and

D D, its ratchets, constructed and applied together in the usual manner, the said pawl-cases being arranged in the common way, with a post, E, between them.

Above the deck or platform F, disposed over the main deck G' and over the pawl-cases, I arrange, in manner as shown, two brake-levers, G G, pivoted to or having their fulcrums in posts or standards H H, fixed to the upper deck, the said levers having their longer arms projected in opposite directions.

The shorter arm of each lever is slotted, as shown at a, to receive one of the connection-rods b b of the pawl-cases, the lever being connected to such rod by a pin, c, going through both.

By seamen taking hold of the longer arm of each of the brakes or levers, and moving it up and down, each

pawl-case will have a reciprocating or vibratory movement imparted to it, whereby it, with its pawl and ratchet, will be caused to revolve the windlass.

Under ordinary circumstances a single brake-lever connected to the two pawl-case rods, arranged athwartships, and having its fulcrum at its middle and between the rods, is employed. Or instead of such, two levers, connected by an intermediate lever and supported by vibratory posts, are used, such being as shown in the patent No. 16,000, granted November 4, 1856, to Christopher Amazeen.

The advantages of two independent brake-levers, one to each pawl-case, as represented in the drawing, are that such admit of the windlass being worked by one of the brake-levers without the other being moved or interfering in any way with the operation of the first. They also admit of both pawl-cases being worked in the same direction at once, thereby enabling the operatives to exert their power with better or more useful effect. There are other important advantages possessed by the employment of independent levers with separate fulcrums, as it admits of longer levers being used. These can well be employed when two levers are connected by a third, as in the Amazeen windlass.

I, therefore, claim—

The two disconnected levers or brakes, combined and arranged, as explained, with the windlass and its ratchets and their pawl-cases, the whole being to operate substantially as specified.

ALBERT RUSSELL.

Witnesses:

R. H. EDDY,  
J. R. SNOW.