L. GARISON.

Brake for Operating Ships' Windlasses.

No. 199,283. Patented Jan. 15, 1878.

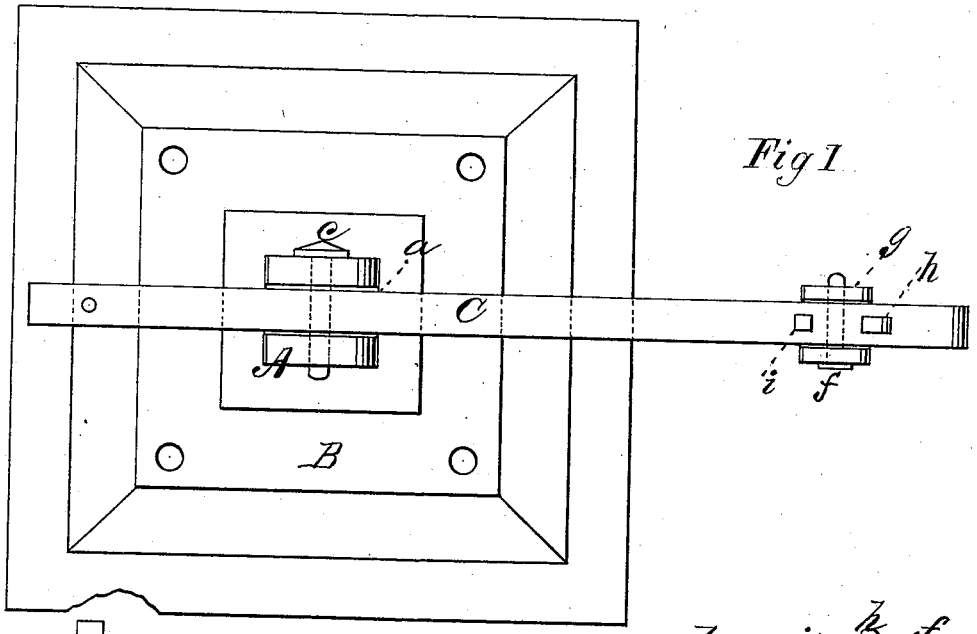

Fig 1

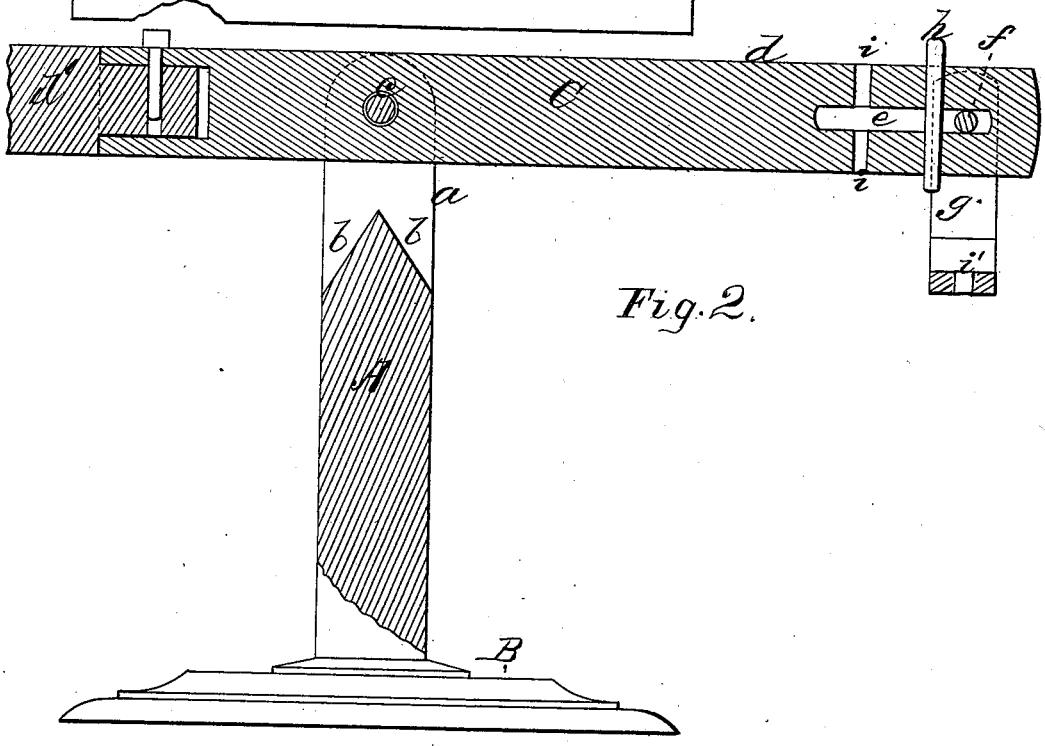

Fig. 2.

WITNESSES

Villette Anderson.

F. J. Clasi.

INVENTOR

Lehman Garison

by E. W. Anderson

ATTORNEY

UNITED STATES PATENT OFFICE.

LEHMAN GARISON, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN BRAKES FOR OPERATING SHIPS' WINDLASSES.

Specification forming part of Letters Patent No. **199,283**, dated January 15, 1878; application filed December 22, 1877.

To all whom it may concern:

Be it known that I, LEHMAN GARISON, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and valuable Improvement in Brake-Heavers; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a top view of my invention, and Fig. 2 is a vertical section thereof.

This invention has relation to improvements in brakes for operating ships' windlasses.

The nature of the invention will be fully understood from the following description.

In the drawing illustrating this invention, such parts as the windlass, the pawl-boxes sleeved upon the spindle, the ratchet-heads upon the windlass, and the rods connecting the levers and pawl-boxes, have been omitted, these features forming no part of this invention, and being in common use at the present day.

In the annexed drawing, the letter A designates a strong upright standard, having a forked upper end, *a*, and properly attached to a base, B, which is designed to be secured to the deck, in the usual position, by means of bolts, screws, or other suitable devices. The bottom of the slot *a* is double beveled, as shown at *b*, for the purpose of allowing the brake-lever C greater play, and at the same time to limit its vibrations. This lever is fulcrumed by means of a bolt, *c*, in the fork *a* of the upright A, the said bolt and the apex of the beveled surfaces of the standard being in the same vertical plane, or thereabout. Lever C is made up of two sections, *d d'*, the one being of metal, and the other, preferably, of wood. The section *d'* is socketed into the power end of section *d*, and is readily detachable therefrom when not required for use. Section *d* has at its power end a longitudinal slot, *e*, from which is suspended, by means of a bolt, *f*, a U-shaped shackle, *g*, that is adjustable to or from the fulcrum *c* of the brake-lever by means of a key, *h*, extending through registering perforations *i* in the said section, at right angles to the length of the said slot *e*. The perforations *i* are spaced, and allow the bolt *f* to be adjusted at the inner or outer end of the said slot, in the first instance increasing the power of the said lever, while diminishing the speed with which said power is exercised, and, in the second instance, decreasing the power while increasing the speed. This is accomplished without shifting the fulcrum-bolt of the brake-lever or perforating the section *d*, whereby its strength would be greatly increased. The rod connecting the pawl-box and brake-lever is secured to the shackle *g* by being passed through a perforation, *i'*, in the lower end of the said shackle, and confined thereto by means of a nut applied upon its upper screw-threaded end, above said shackle, or by any equivalent means. These levers may project toward the ends of the windlass, or may be arranged at right angles thereto, as I may elect. One of these levers and attachments operate independently in connection with each of the ratchet-heads of the windlass, the strain of raising an anchor, or hauling a ship into a dock or up to its moorings, being thus subdivided, so that the whole of the strain does not fall upon either of the levers and its supports at the same time, by which means the risk of breaking is greatly lessened.

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

The combination, with the U-shaped shackle *g*, having a rod-aperture, *i'*, of the brake-lever C, having the longitudinal slot *e*, the spaced perforations *i*, the key *h*, and the shackle-bolt *f*, as and for the purpose specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

LEHMAN GARISON.

Witnesses:

ALLEN H. GANGEWER,

H. B. LAKE.