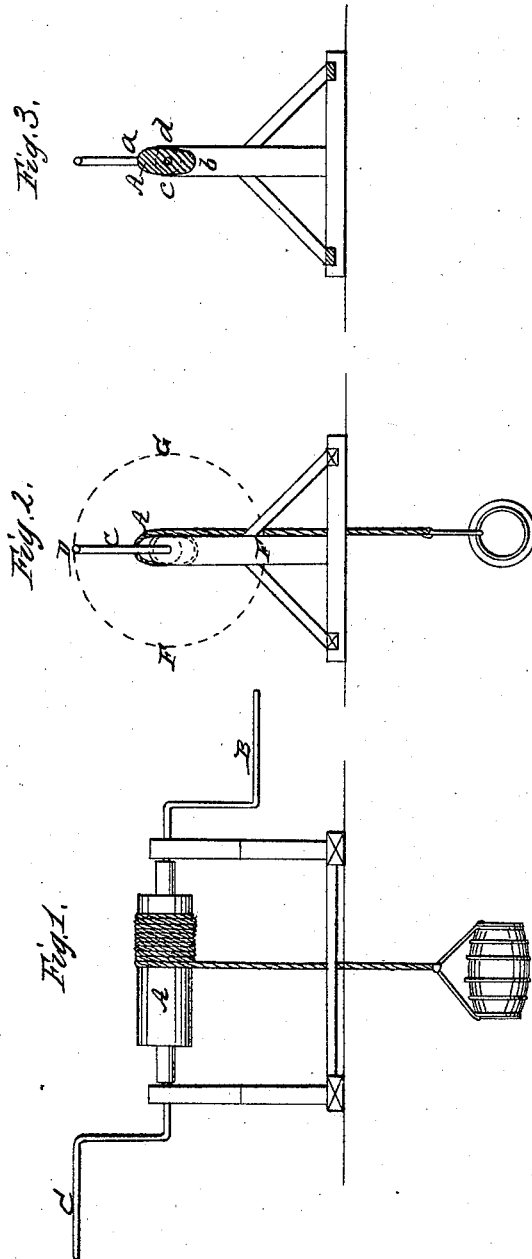


E. Robinson,

Windlass.

N^o 2,473.

Patented Feb. 28, 1842.



UNITED STATES PATENT OFFICE.

ENOCH ROBINSON, OF BOSTON, MASSACHUSETTS.

WINDLASS OR DRUM FOR RAISING WEIGHTS.

Specification of Letters Patent No. 2,473, dated February 28, 1842.

To all whom it may concern:

Be it known that I, ENOCH ROBINSON, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and
5 useful improvement in windlasses or drums or articles on which the rope is wound by which a heavy body is elevated or drawn in any direction and to which windlasses or drums or articles the elevating or moving
10 power is applied unequally during their revolutions on their axes, and that the following is a full and exact description of the same, which description, taken in connection with the drawings therein referred to,
15 forms my specification, wherein I have set forth the nature and principles of my improvement, by which it may be distinguished from others of a similar character and such portion of the same as I claim and for
20 which I solicit Letters Patent.

In the accompanying drawings Figure 1, represents a front elevation of a windlass having my improvement Fig. 2, is an end view and Fig. 3, is a vertical and transverse
25 section.

My improvement consists in making the barrel A on which the rope is wound elliptical or oval in its transverse section, or having its diameter in one direction or from
30 *a* to *b* larger than that in the opposite or from *c* to *d* as represented in Fig. 3. The cranks B, C, by which the barrel is turned are arranged in the plane of the largest diameter or *a b*.

35 The windlass being turned by the operatives acting on the cranks, they exert the least power on the same when the cranks

are in their highest or lowest positions or at or near the points D, E Fig. 2, and the greatest when they are at or near the points 40 F G or while the cranks are horizontal. When the cranks are upright or the least power is exerted the rope is winding over the flat portions *c, d*, Fig. 3, of the barrel, with the small opposing leverage of half 45 the shorter axis of the elliptical section, and when they are horizontal the rope is being wound over the portions *a, b*, and is opposed by the leverage of half the longer axis of the elliptical section. Therefore as 50 the power of the workman decreases it is applied to the same advantage as when exerted to its greatest effect, and thus by a windlass constructed in this manner a greater weight can be elevated than if made 55 circular in cross section.

I shall claim as my invention—

Constructing the barrel on which the rope is wound, elliptical or oval in its cross section or having its diameter in one direction 60 greater than in the opposite direction, and arranging the cranks of said barrel in the plane of its longest diameter, the whole being for the object above specified.

In testimony that the foregoing is a true 65 description of my said invention and improvements I have hereto set my signature this twenty-eight day of December in the year eighteen hundred and forty.

ENOCH ROBINSON.

Witnesses:

R. N. EDDY,

JOHN NOBLE.