D. L. Winsor,

Windlass.

No. 12,083. Patented Dec 12, 1854.

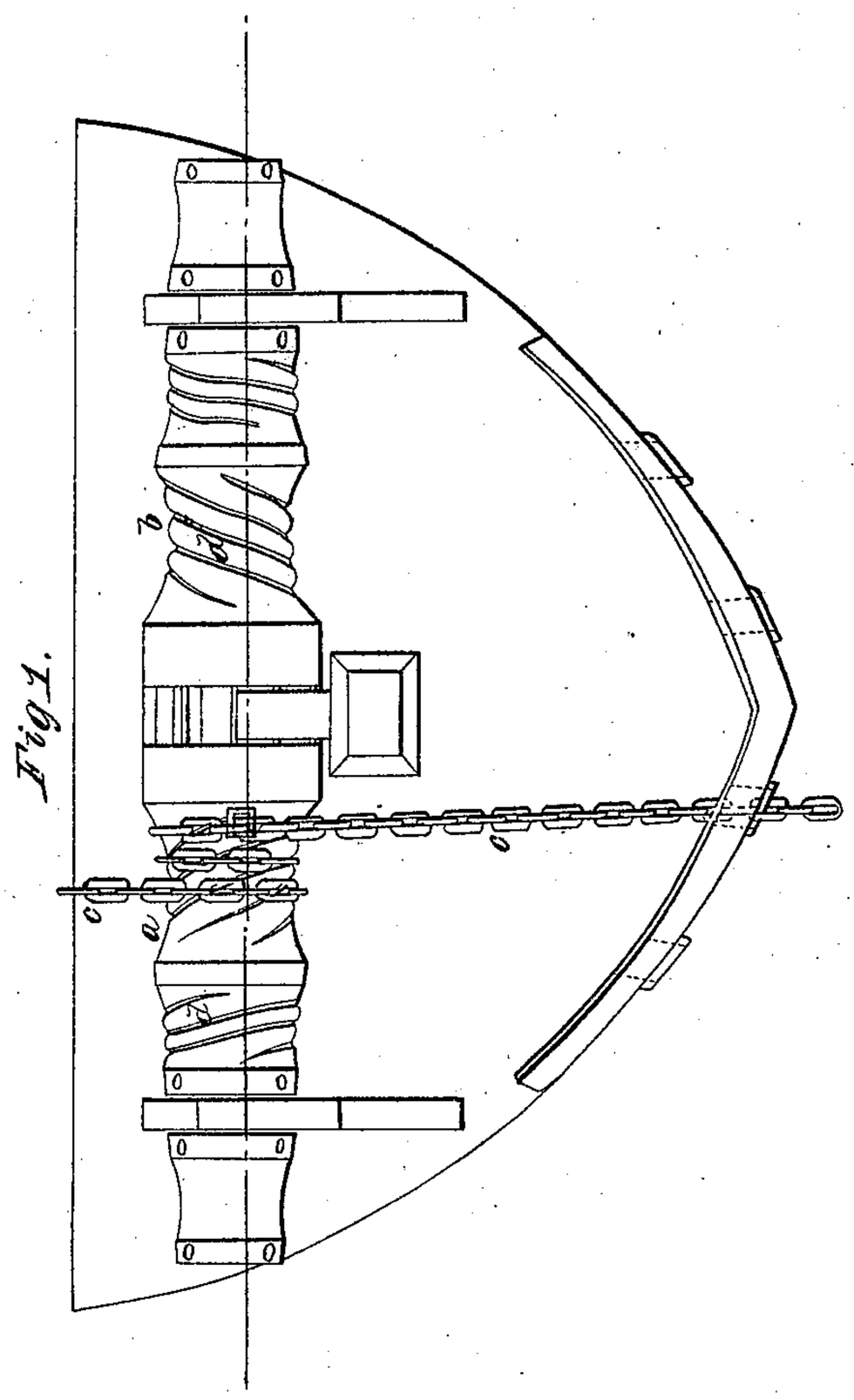

Fig 1.

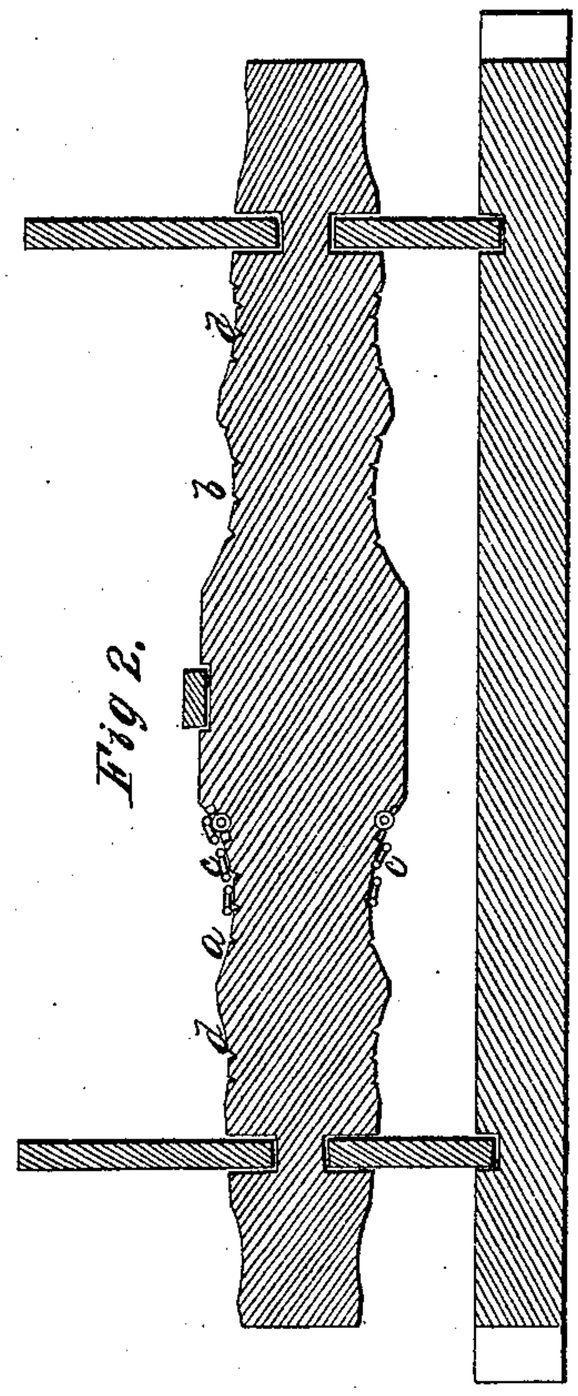

Fig 2.

Witnesses.
Joseph Garrett
T. R Lincoln

Inventor.
Daniel L. Winsor

UNITED STATES PATENT OFFICE.

DANIEL L. WINSOR, OF DUXBURY, MASSACHUSETTS.

SHIP'S WINDLASS.

Specification of Letters Patent No. 12,083, dated December 12, 1854.

To all whom it may concern:

Be it known that I, DANIEL L. WINSOR, of Duxbury, in the county of Plymouth and State of Massachusetts, have invented certain new and useful Improvements in Windlasses and that the following description, taken in connection with the accompanying drawings hereinafter referred to, forms a full and exact specification of the same, wherein I have set forth the nature and principles of my said improvements by which my invention may be distinguished from others of a similar class, together with such parts as I claim and desire to have secured to me by Letters Patent.

The figures of the accompanying plate of drawings represent my improvements.

Figure 1, is a plan or top view of my improved windlass. Fig. 2, is a longitudinal central vertical section of the same.

In windlasses used on ship board for heaving anchors and similar work considerable difficulty has been experienced from the surging and overriding of the chain or cable on the barrel of the windlass, thereby requiring constant "fleeting" or slipping of the chain by hand. This objection is completely obviated by my improved windlass, which is self fleeting and keeps the chain always in proper position without any extraneous aid. I effect this desirable result by forming on the surface of the windlass barrel a series of spiral grooves or scores being farthest apart at the extremities of the barrel on the inclined portion of the same and lessening in width as they approach the middle of the barrel.

a, *b*, represent the barrels of a windlass *c*, *c*, the chain. The barrels of the windlass have formed on them four spiral scores *d*, *d*, &c. These spiral scores are widest at the extremities of each barrel on the inclined portion of the same and lessen in width as they approach the middle of the barrel.

In the operation of heaving in the chain it will be observed that when the chain inclines in the least degree to ride above the commencing point of the spiral grooves it is slipped or "fleeted" at every quarter revolution of the windlass by coming in contact with one of the spiral grooves or scores, thereby preventing the chain from surging and shaking. By means of the spiral scores the chain is thus continually carried toward the center of the barrel and is thereby made to travel in a very narrow path. By this arrangement a barrel of much less width can be used than those heretofore employed in windlasses, thereby leaving room for an additional barrel *e*, *e*, on the side of each of the main barrels. These extra barrels can be used for the stream chains which are necessarily worked independently of the bower chains and are of great advantage especially in whale ships where many ropes are used in "cutting in" the whales, and as ropes will work on my improved windlass in the same manner as a chain much more work can be accomplished, as there is no time spent in fleeting them.

In order to aid in fleeting the chain in case of extraordinary emergencies four rollers *f*, *f*, *f*, *f*, are inserted in the larger and inclined portion of the barrel so that when the chain comes in contact with one of the rollers it will thereby receive an additional impetus toward the center of the barrel.

It will be observed that the spiral scores which extend up into the inclined or largest portion of the windlass barrel form a series of incline planes from which as soon as the chain rises and comes in contact with them it receives an impetus which carries it toward the center of the barrel, which arrangement operates admirably in "paying out" chain, the action of which is reversed thereby inclining the chain toward the center of the barrel. The chain is not only fleeted at about every quarter revolution of the windlass, but is also held at such revolution by the spiral scores, thereby preventing the slacking of the chain. The spiral scores further form a corrugated surface for the chain to engage with, thus requiring less power to hold the chain.

Having thus described my improvements I shall state my claims as follows.

What I claim as my invention and desire to have secured to me by Letters Patent is—

1. Forming on the surface of the barrel of a windlass a series of spiral scores or grooves which operate to "fleet" the chain substantially as hereinabove described.

2. I also claim placing friction rollers on the larger and inclined portion of the windlass barrel for the purpose of aiding in "fleeting" the chain as above set forth.

DANIEL L. WINSOR.

Witnesses:

JOSEPH GAVETT,

F. R. LINCOLN.