

P. H. Jackson,

Windlass.

N^o 48,282.

Patented June 20, 1865.

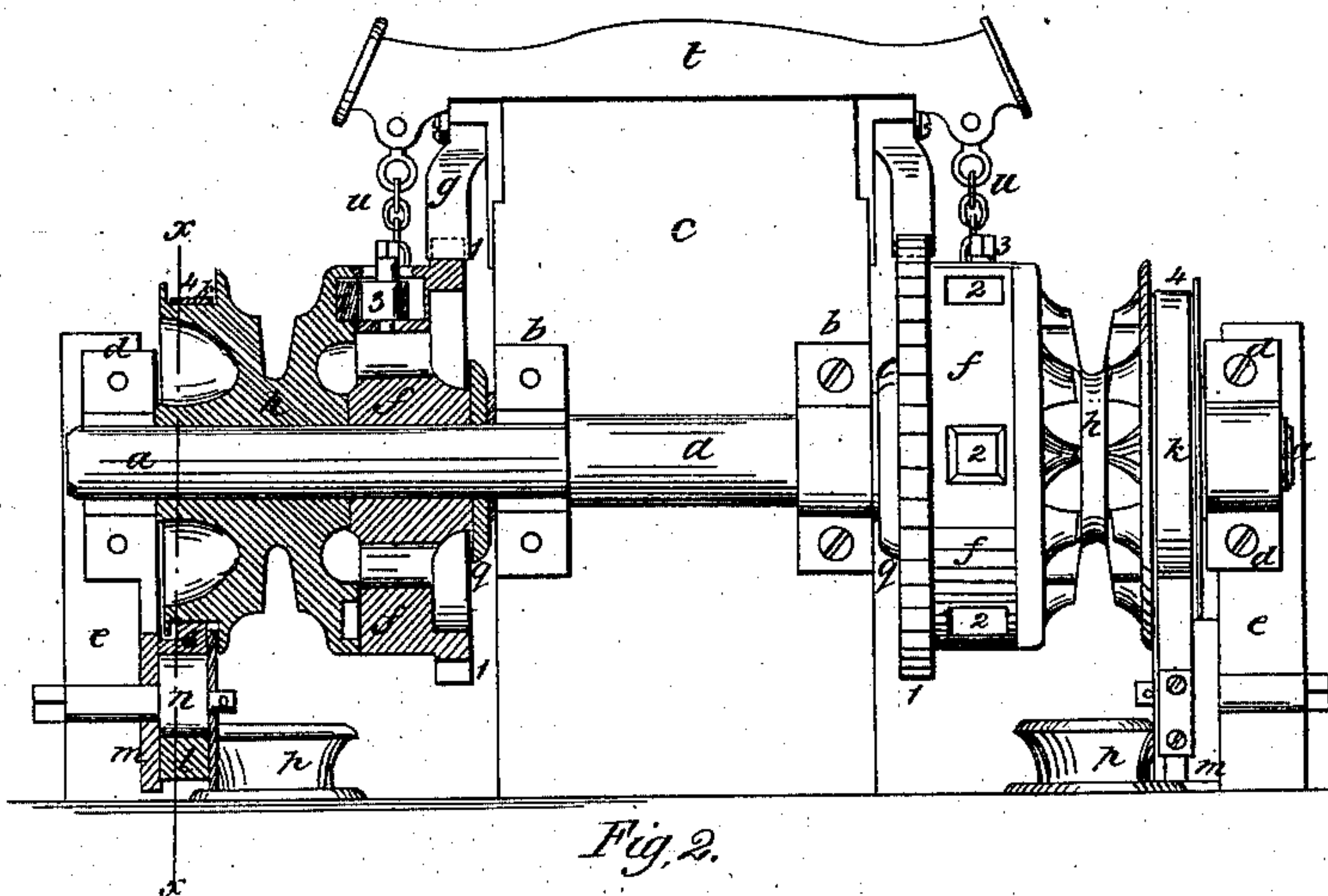
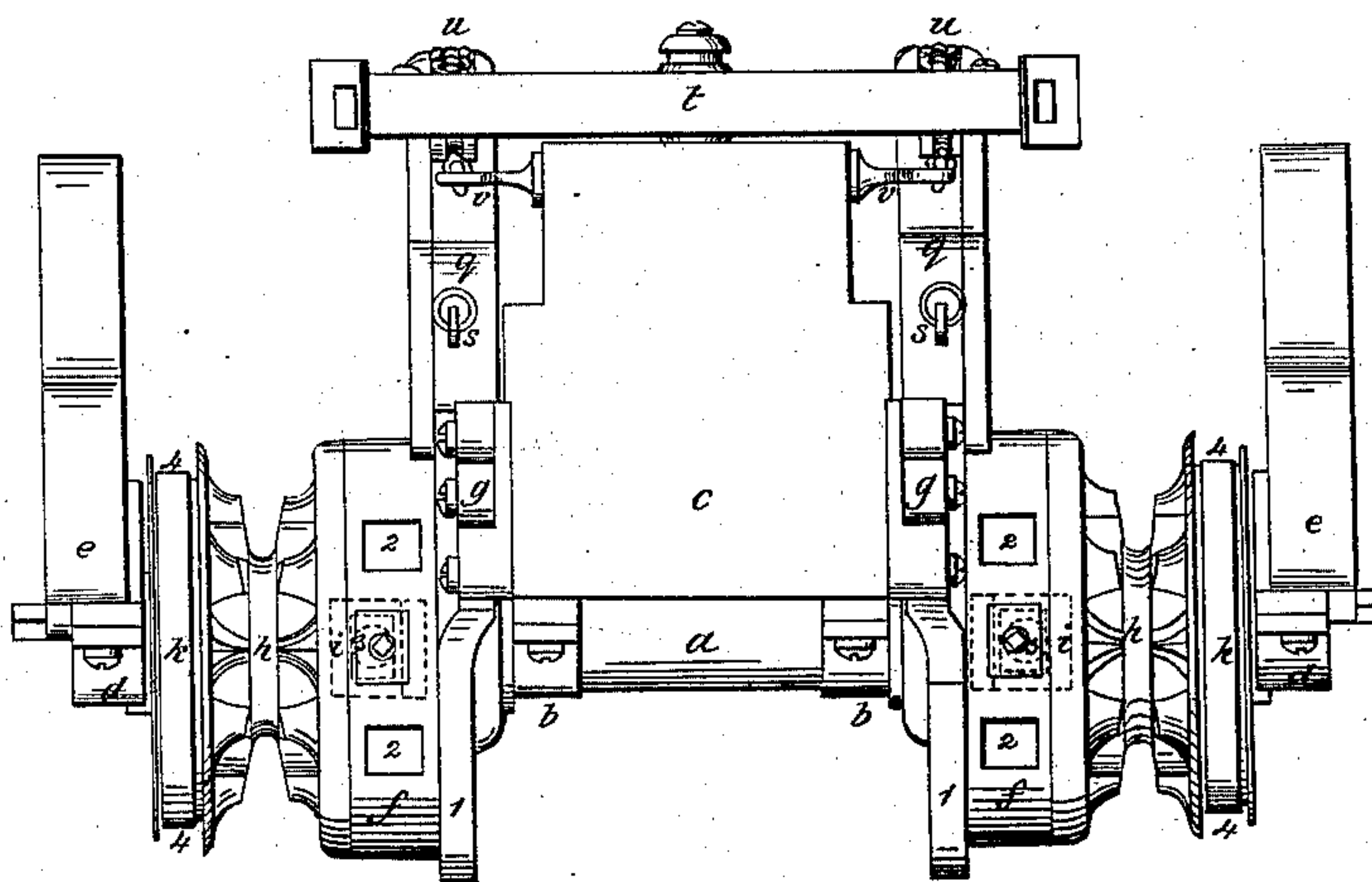


Fig. 1.



Witnesses. *Thos Geo Harwood.*
James C. Serrell Junr.

Inventor
Peter H Jackson.

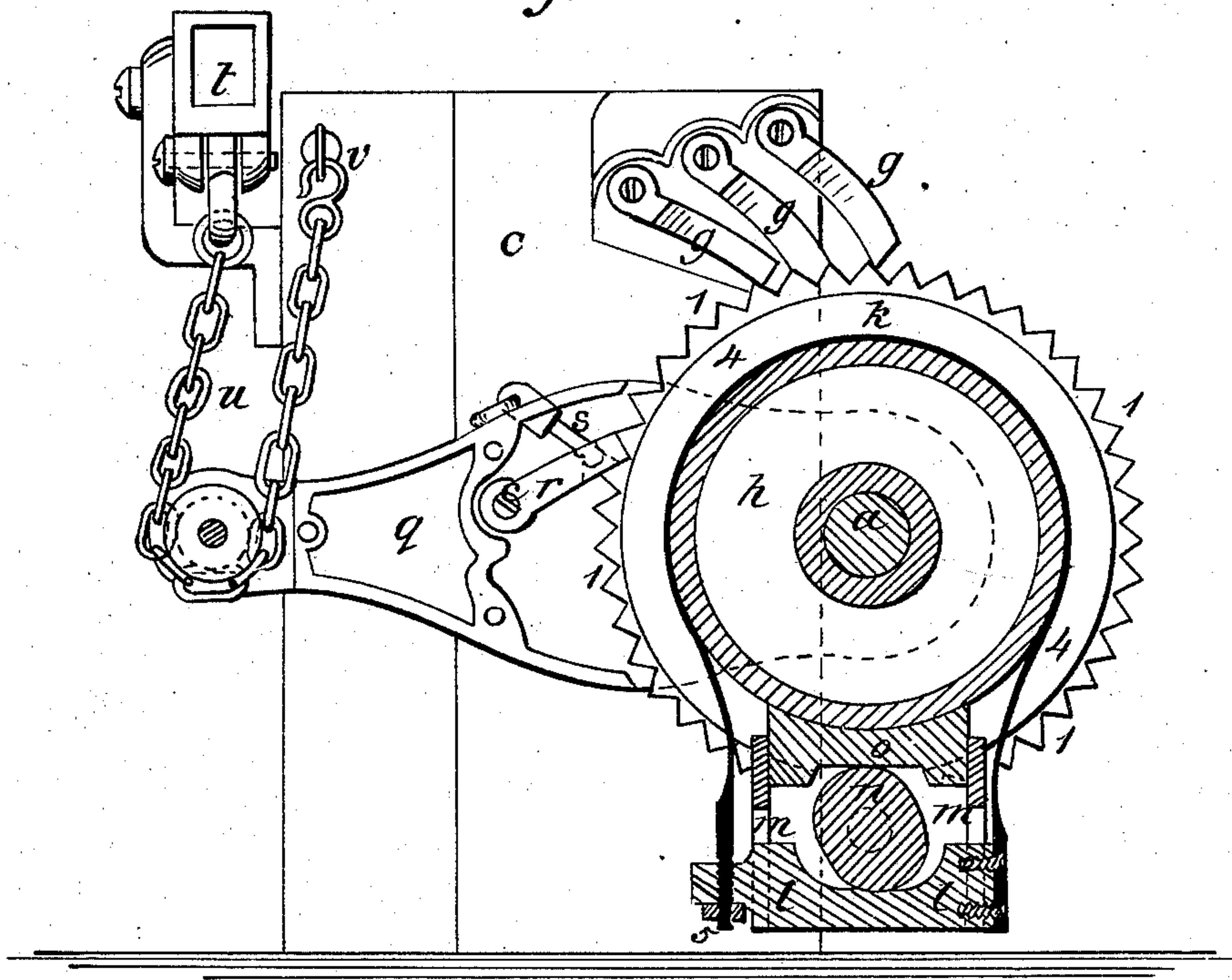
2 Sheets, Sheet 2.
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Fig. 3.



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Inventor
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UNITED STATES PATENT OFFICE.

PETER H. JACKSON, OF NEW YORK, N. Y.

IMPROVED WINDLASS.

Specification forming part of Letters Patent No. 48,282, dated June 20, 1865.

To all whom it may concern:

Be it known that I, PETER H. JACKSON, of the city and State of New York, have invented, made, and applied to use a certain new and useful Improvement in Windlasses; and I do hereby declare the following to be a full, clear, and exact description of the said invention, reference being had to the annexed drawings, making part of this specification, wherein—

Figure 1 is a plan of said windlass. Fig. 2 is an elevation, the windlass-head on one side being shown in section; and Fig. 3 is a section transversely of the shaft at the line *xx* of Fig. 2.

Similar marks of reference denote the same parts.

The nature of my said invention consists in an improved means for connecting or disconnecting the windlass-heads with the main ratchet-wheels, so that one head may remain stationary while the chain is drawn in. I also employ a peculiar friction mechanism that arrests the rotation of the windlass-head while the chain is running out; and I introduce sockets for hand-spikes in the ratchet-wheels, so that the contiguous chain-wheels can be rotated with a quick movement, if required, for any light work, instead of the slow movement ordinarily communicated by the brake-levers.

In the drawings, *a* is the windlass-shaft, supported by boxes *b b* on the bit *c*, and *d d* on the bits *e e*.

f f are wheels secured permanently to the shaft *a*, having ratchet-teeth at 1 1 taking the pawls *g g*, and also sockets at 2 2 for the insertion of a hand-spike, if desired at any time to turn the windlass quickly when but light work is required, providing the hand-spike's sockets, as represented, give increased capacity to the windlass, because the wheels for the chain can be turned quickly or slowly.

h h are chain-wheels, forming the windlass itself. Each wheel is made with recesses adapted to the reception of the link of the chain-cable. These chain-wheels are loose upon the shaft *a*, so that said shaft may rotate without turning the chain-wheels. I employ a connecting-bolt, *i*, set in a recess in each wheel *f*, so that it may be drawn entirely into said wheel, or its end be projected into a corresponding recess in the face of the wheel *h*. Each bolt is formed with a mortise through it, in which is an eccentric, 3, having an arbor passing through a cap secured in the surface of *f*, and a square on

the outer end of such arbor, whereby the eccentric can be turned for the projection or retraction of the said bolt *i*, and the consequent connection or disconnection of the chain-wheel *h* with the ratchet-wheel *f*.

I provide a circular recess at 4 around each chain-wheel *h*, that receives the friction-strap *k*, the ends of which strap are connected to a block, *l*, in a box, *m*. One end of the strap is permanently attached, while the other end may be adjusted by the screw 5 and nut, or in any other suitable manner. Above this block *l* is a cam, *n*, on a horizontal axis, and over this, in the box *m*, is a block, *o*, that is curved at the upper surface to correspond with the under side of the chain-wheel. It will now be seen that when the cam *n* is turned by a lever applied to its square arbor the double cam *n* forces the block *o* up and draws down the strap *k*, producing friction on the chain-wheel *h* sufficient to control the letting out of the chain-cable as it runs over and rotates said wheel *h*, and there is but little strain on the shaft *a*. The cam *n*, acting between the blocks *o* and *l*, throws a uniform friction and pressure upon the friction-wheel, and the axis of the cam may be in an elongated bearing, so that the parts will freely accommodate themselves to the friction-wheel, even without the strap being adjusted in its length. This friction device may be applied to any part of the chain or other wheel.

p p represent the upper ends of the chain-locker pipes.

Any ordinary or desired mechanism may be employed to rotate the wheels *f*. I have shown the levers *q* carrying pawls taking the ratchet-teeth 1. The pawl *r* in one of these levers is shown more clearly in Fig. 3. It is hung on a center, 6, and provided with a loose lifting-link, *s*, that does not prevent the pawl rising and falling, unless said link is drawn up through its slot in *q* and given a quarter-turn, so that its edges set across the mortise and hold the link and pawl up.

t is a hand-spike-brake socket, with chains *u* passing from the ends around sheaves in the ends of the levers *q*. These chains may be hooked to eyes *v* and act as a double purchase, or they may be hooked to the eye on the under side of the hand-spike sockets *t* and form a single purchase, as shown in Letters Patent granted to me.

This windlass is strong and easily controlled

in allowing the chain to run out or in drawing it in, and either side may be worked separately, or both operated simultaneously; and my friction device is not injuriously affected by the parts getting out of line through the straining or working of the vessel.

What I claim, and desire to secure by Letters Patent, is--

1. The bolt *i*, actuated by the cam or eccentric 3, for connecting or disconnecting the chain-wheel *h* from the wheel *f*, as specified.

2. The strap *k* and blocks *l* and *o*, in combination with the cam *n*, substantially as specified.

3. The wheel *f*, provided with hand-spike sockets 2, in combination with the chain-wheel *h* and the bolt *i* or its equivalent, for connecting or disconnecting the wheels *f* and *h*, as set forth.

4. The levers *q* and pawls *r*, fitted as specified, in combination with the ratchet-wheel *f* and chain-wheel *h*, as set forth.

Dated May 5, A. D. 1865.

PETER H. JACKSON.

Witnesses:

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JAMES E. SERRELL, Jr.