C. Perley,

Windlass,

No. 7,532, Patented July 30, 1850.

Fig. 1.

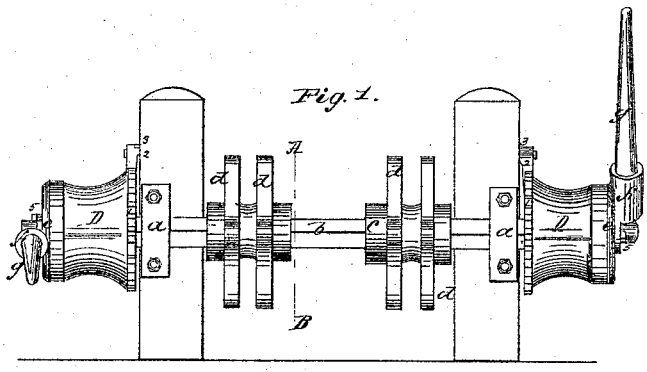


Fig. 2.

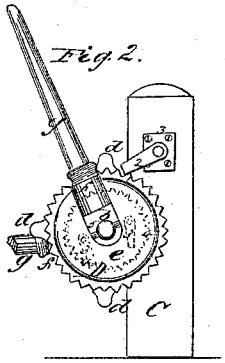


Fig. 3.

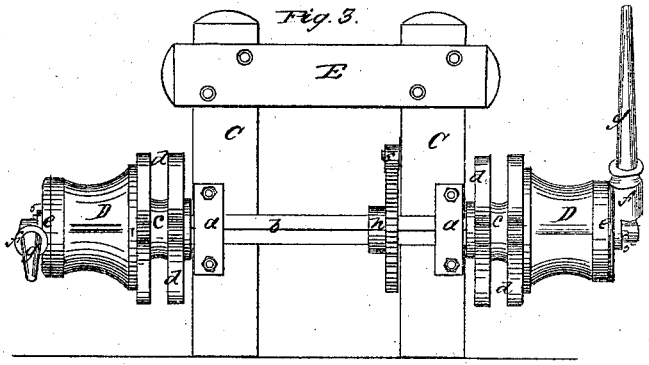


Fig. 4

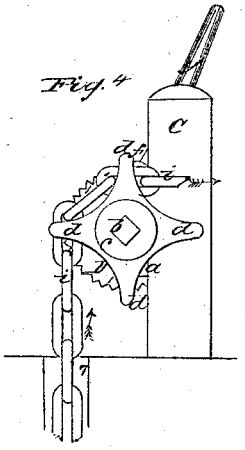
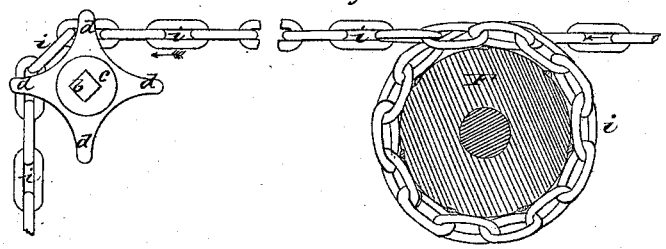


Fig. 5.



Witnesses

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Samuel W. Serrell

Inventor:

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UNITED STATES PATENT OFFICE.

CHAS. PERLEY, OF NEW YORK, N. Y.

JIGGER-WINDLASS.

Specification of Letters Patent No. 7,532, dated July 30, 1850.

To all whom it may concern:

Be it known that I, CHARLES PERLEY, machinist, of the city and State of New York, have invented, made, and applied to use certain new and useful improvements in the application and combination of parts of mechanical means for moving and working chains or ropes already separately patented by me for nautical and other purposes, by which improvements and combinations as now arranged by me the original means employed are made to accomplish purposes and are applicable to uses which the separate inventions will not effect or apply to alone, which invention I term the "Jigger-Windlass," and for which invention and improvements I seek Letters Patent of the United States, and that the said imrpovements, with their operation, uses, and effects, are fully and substantially set forth and shown in the following description and in the drawing annexed to and making part of this specification, wherein—

Figure 1 is a side view of my improvements, as attached to two bits; Fig. 2 is an end view of the same; Fig. 3 is a side view of these improvements, when in use with bits having a cavel; Fig. 4, represents the chain lifter, as lifting the cable out of the chain locker, being a section at line A, B. Fig. 1, and Fig. 5, represents the same means as operating to take up the slack from the windlass, and place the chain in the chain locker.

The like marks of reference apply to the same parts in all the figures.

c, are bits, in any convenient part of the ship, these carry journal boxes *a*, taking a square shaft *b*, turned around in the journals, and carrying between the journals, one or more hubs, with horns or flanches *d*, to take the chain, as described in my patent of March 21, 1848. The shaft *b*, is prolonged outside the journals *a*, and receives the winch heads *d*, with a ratchet 1, on the inner end, with a pawl 2, on a flanch 3, on the bit *c*, this pawl is so set, that it will turn over, and take the ratchet, either side of the center; the end of the shaft *b*, is turned around, and fitted to receive a rotating disk, *e*, with pawls 3, taking a female ratchet 4, on the inside of the end of the winch head D, as shown by dotted lines in Fig. 2, and a pin 5, secures all in place, this disk has a handspike socket *f*, to take a handspike *g*. This head is the same, in construction and operation, as that protected in my patent of the 29th day of May 1849.

The Fig. 3, shows the bits C, as having a cavel E, across them; for this reason, it would be inconvenient to lead the chain through between the bits, under the cavel, so I place the cable lifters *d*, outside the bits, and against the end of the winch head D, and as a ratchet could not conveniently be used on the ends of the heads, as in Fig. 1, I place a ratchet wheel *h*, on the shaft *b*, between the bits, with a pawl 6, on one or both bits, operating each way, similarly to that before described.

It will be evident, that by leaving out the winch head D, Fig. 3, and placing the female ratchet ring 4, against and connected with the horns *d*, with the pawls 3, 3, the disk *e*, and handspike *g*, in connection with it, that the same result will be obtained, (except the convenience of the winch head,) namely, the means of rotating the horns *d*, *d*, in either direction, in a manner, and for purposes, not originally contemplated by me; which application of the double acting pawls, to move the horns in either direction, is believed to be entirely new.

The Fig. 4, shows the cable lifter, as operating to raise the chain *i*, out of the pipe 7, in the direction of the arrows, which pipe 7, leads to the chain locker below.

The Fig. 5, shows a windlass F, which is worked in any usual manner, to draw the chain *i*, in the direction of the arrow; and the motion of the cable lifter, when reversed, by working the handspikes on the side shown in Fig. 2, takes up the slack from the windlass, and places the chain through the pipe, into the chain locker beneath.

At first sight, it may appear, that this invention is no more, than putting the two before mentioned inventions in use together; but these first patents merely shows, first, the application of the apparatus for lifting the chain out of the locker below; and second, the application of the double acting winch, to heave on, for any general purposes. In the combined application, each of these parts is still separately applicable to all the original uses; and by reversing the action of the pawls 2, Figs. 1 and 2, or the one pawl 6, Fig. 3, the action of the cable lifter is made useful, to take up the slack of the chain cable, when weighing the anchor, the horns *d*, *d*, being spaced to the size of the links,

the weight of the chain, in the vertical pipe, keeps the links on the horns, and thus supersedes the ordinary "jigger tackle," heretofore used; thus enabling, generally, two men to effect the "holding on," instead of employing several more men, to take up the length of the chain, gained at each heave of the windlass, by a "jigger fall," held on to by the men, or led to the capstan; and where the capstan does not stand convenient for this use, as in large merchant or steam ships, having the windlass below the spar deck, or top gallant forecastle, this combination becomes peculiarly useful, because it first does away the employment of a considerable part of the crew, at the "jigger tackle," with or without the capstan; and where the space, forward of the mainmast, is used for the accommodation of passengers, or stores, as is now frequently done, this combined apparatus can be placed near the windlass, or in any position, that will lead the chain cable fair to the horns *d*, *d*, and be near the pipes to the chain locker; and when riding at anchor, or when catting the anchor, these means allow the chain to be delayed, or bitted, upon the bits *c*, when fitted with the cavel E, by simply turning the bight of the chain "ship shape" over them; or when the bits are used without the cavel, the chain can be held by the bit and winch head, as these are strong enough for this use; and by having a rope, or a small chain, attached to the chain cable near the windlass, and around one of the winches D, these give additional means, of holding all that has been gained, either while the anchor is weighing, or while the cable is being bitted, preparatory to catting the anchor; so that the weight of the anchor, or the motion of the ship, cannot cause the cable to fleet round the windlass, and renew the labor of getting the anchor to the position for catting; and when the cable is bitted for catting, the winches D, can take the cat tackle fall, and bring the anchor to the cat head; and afterwards take the fish tackle fall, to stow the anchor; in all these cases, enabling a few men to do the ordinary work, and labor, of a greater number.

Besides all these effects, it is well known, that in weighing the anchor, the chain, winding around the windlass, has to be returned from the larger to the smaller part of the windlass barrel, by partially slacking the "jigger," this operation, nautically termed "surging" the cable, even when well managed, is frequently troublesome, and sometimes dangerous to the men holding on the "jigger," but more especially so, when, by an extra heave on the windlass, the chain is brought so far up, on the larger part of the windlass barrel, that it "surges" of itself; this it always does with a sudden jerk, that is liable to, and frequently does upset the men at the "jigger," sometimes causing personal injury, and in this case, the weight of the anchor fleets the chain around the smaller part of the windless, and carries out more or less, of the length previously hove in.

By the application of the combination and arrangement above described, and shown, this loss of time, and labor, and risk of personal injury to the crew, which are of great importance in any dangerous situation, are all avoided, and so thoroughly prevented, as to cause the seamen, who have used it, to denominate it the "Gypsy Windlass," because it does so much, to save their labor, and insure their individual safety.

The individual inventions, in this combination, will appear on examination to be differently used, as in the patent on my cable lifter, the horns are claimed "conjointly with the disks, pawl boxes, pawls, and lever sockets, to be used in working the flanches" or horns; and in the patent on the direct and counter motion winch, the arrangement is merely to give the winch head, itself, rotation in either direction, on a fixed shaft, and not to give motion to any other apparatus; therefore this combination of parts in the original inventions, is an entirely new invention, on which I claim to be entitled to separate Letters Patent, as it produces new and useful results, as heretofore set forth.

I therefore claim as new and desire to secure by Letters Patent of the United States—

The application of the double acting pawls 3, 3, ratchet 4, disk *e*, socket *f*, and handspike *g* with or without the winch head D, whereby the power is applied to the horns *d*, *d*, to rotate them in either direction as required, said application and arrangement being a combination of the double acting winch described in my patent of 29 May, 1849, and the cable lifting horns described in my patent of 21 March, 1848, heretofore referred to whereby this combination of these two previously patented inventions effect new and useful purposes not contemplated and not attainable by either of the inventions separately substantially as described and shown.

In witness whereof I have hereunto set my signature this first day of June, one thousand eight hundred and fifty.

CHARLES PERLEY.

Witnesses:
WM. SERRELL,
LEMUEL W. SERRELL.