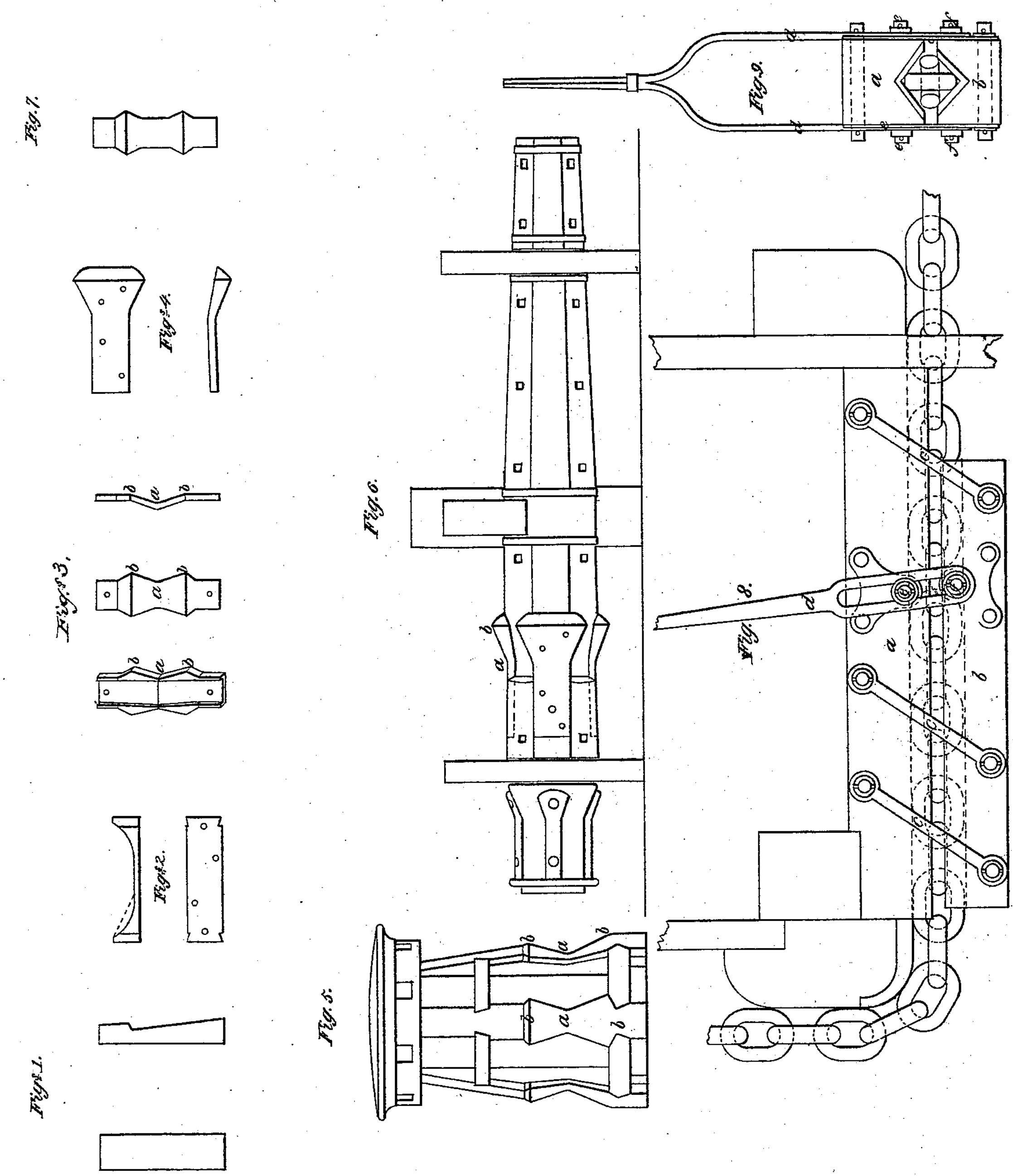
J. Grylls,

Windlass.

No. 2,876. Patented Dec. 12, 1842.



Witnesses.

Henry Wood of Portsea
Joseph Bazalgette Portsea

Inventor.

John Grylls

UNITED STATES PATENT OFFICE.

JOHN GRYLLS, OF PORTSEA, ENGLAND.

SHIP'S CAPSTAN OR WINDLASS AND CABLE-STOPPER.

Specification of Letters Patent No. 2,876, dated December 12, 1842.

To all whom it may concern:

Be it known that I, JOHN GRYLLS, a subject of the Queen of Great Britain, and now residing at Cumberland street, Portsea, in the county of Hants, in the Kingdom of England, shipwright, have invented or discovered a new and useful Invention of certain Improvements in Machinery Used in Raising or Lowering Weights; and I do hereby declare that the following is a full and exact description thereof.

My invention of improvements in machinery for raising or lowering weights is divided into two sections and consists firstly in improvements in the form or construction of the whelps applied to or formed on the barrels of windlasses, capstans and other such barrels used for raising or lowering weights and secondly in an improved construction of stopper for cables.

In order that the construction of my improved whelps may be more perfectly understood and distinguished from those at present in use, I have exhibited in the accompanying drawings views of both the new and old construction of whelps.

Figure 1 represents a front and side view of the old construction of whelps intended to be applied to a capstan. Fig. 2 represents similar views of the old whelps intended for a windlass. Upon inspecting these figures it will be seen that both the sides of the whelps are parallel to each other. Fig. 3 exhibits front, side and back views of my improved whelp intended to be applied to a capstan and Fig. 4 exhibits front and edge views of the same as intended for a windlass.

It will be seen that the sides of my improved whelps instead of being parallel to each other as in the old construction have side angles or inclined planes formed thereon as it will be seen that the whelps are wider at the top and bottom than at the middle at *a* or where the top and bottom pieces form the obtuse angle as at *a*.

It has been found by experience that upon winding up a rope, chain or cable by means of a capstan or windlass with the old construction of whelp as seen in Figs. 1 and 2, the rope, chain or cable which is originally placed around the whelp at *a* will gradually as the capstan or windlass revolves creep up or down the whelp to the points *b* from whence it must be brought back again to *a* before the operation of winding can be continued. From this it will be easily understood by all persons using or knowing the use of capstans and windlasses that much valuable time is unavoidably by the rope or cable suddenly running out and great risk of snapping the cable is incurred by the violent jerks to which it is liable when moving from a large circumference to a smaller one. By my improved whelp however all this is avoided and there is no necessity to stop the winding operation of the capstan, windlass or other barrel to lower the rope to its original position at *a* as the side angles or angular inclined sides of my improved whelps effectually prevent the rope, chain or cable from creeping upward or downward and consequently prevents the sudden singe before alluded to when the old whelps are employed and therefore the risk of snapping the rope or running out is avoided.

Fig. 5 represents the side elevation of a capstan having my improved whelps applied thereto and Fig. 6 is a similar view of a windlass with the improved whelps which in order to show them more distinctly are colored in both these figures.

Fig. 7 exhibits a slight alteration in the construction of my improved whelp in which the side angles or inclined sides instead of extending down to the center and meeting at the point *a* are made shorter.

The second part of my invention relates to an improved construction of cable stopper and consists in the employment of two parallel surfaces between which the cable passes freely when the surfaces are separated but will be retarded more or less or wholly stopped depending upon the approach of the two parallel surfaces and it will be found that by means of employing such parallel surfaces and holding a considerable length of the cable longitudinally between them that a cable may be better governed in its movement or wholly stopped than by the use of the cable stopper now used.

Fig. 8 represents a side view of my improved cable stopper and Fig. 9 is an end view of the same. The parallel surfaces are seen at *a*, *b* and are made of oak or other wood, the grooves in their working surfaces being lined with iron or the parallel surfaces may be made wholly of iron or other suitable material. The parallel surfaces are connected together by bars *c*, *c*, *c* in a similar manner to a parallel rule and *d* is forked lever having slots formed on each side of the fork and in which work the pins *e* and *f*,

one pin *e* being connected to the upper parallel surface *a* and the other one *f* to the lower surface *b*. From this it will be evident that by moving the forked lever *d*, the parallel surfaces will be brought towards or separated from each other as the case may be and that as a considerable length of cable is placed longitudinally between the parallel surfaces a very great amount of resistance may be obtained. Instead of employing a lever as at *d* for bringing the parallel surfaces *a* and *b* nearer to or separating them further from each other, a screw or any other suitable mechanical power may be used in place thereof.

I would here remark that when the stopper is intended for hempen cables, I make the grooves in the working surfaces *a* and *b* semicircular.

Having now described my invention and the manner of carrying the same into effect, I wish it to be understood that I claim—

1. Constructing or making whelps to be applied to capstans, windlasses and other barrels of a like nature with angular or inclined sides as is clearly shown in Figs. 3, 4, 5, 6 & 7, of the accompanying drawings by means of which angular or inclined sides the cable is prevented from suddenly singeing or running out as is the case with the old whelp.

2. I claim the manner of constructing cable stoppers with parallel surfaces capable of holding on to a considerable length of cable at one time, the same being constructed as shown and described in reference to Figs. 8 and 9 of the accompanying drawings.

In witness whereof I, the said JOHN GRYLLS, have hereunto set my hand and seal this twenty-sixth day of August, in the year of our Lord one thousand eight hundred and forty-two.

JOHN GRYLLS. [L. S.]

Witnesses:
HENRY WOOD,
JOSEPH BAGALFETTI.