J. Edgecomb,

Capstan.

No. 113,032. Patented Mar. 28. 1871.

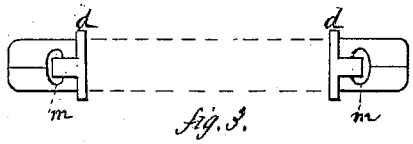

fig. 3.

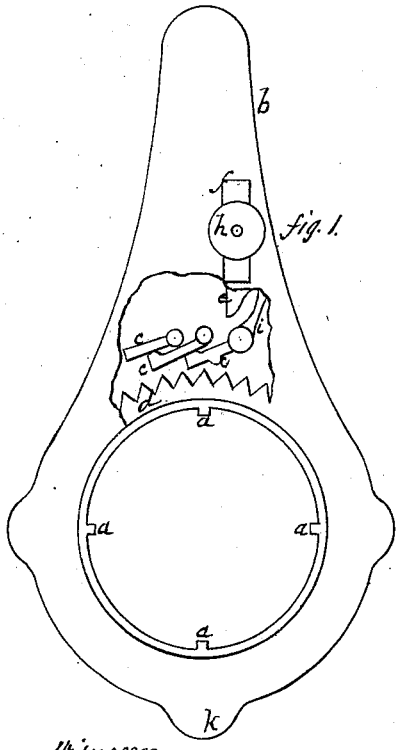

fig. 1.

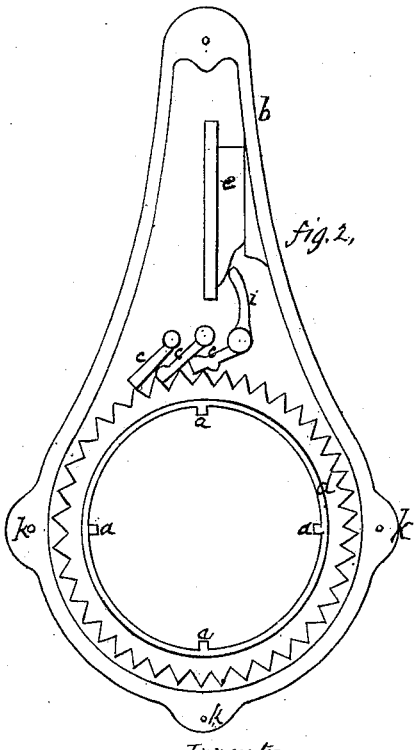

fig. 2.

Witnesses,

Henry C. Houston

Wm Franklin Seavey

Inventor,

Joseph Edgecomb

per Wm. H. Clifford atty.

United States Patent Office.

JOSEPH EDGECOMB, OF GARDINER, MAINE.

Letters Patent No. 113,032, dated March 28, 1871.

IMPROVEMENT IN PURCHASES FOR CAPSTANS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, JOSEPH EDGECOMB, of Gardiner, in the county of Kennebec and State of Maine, have invented a new and useful Improvement in Purchase for Capstans; and I do hereby declare the following to be a full, clear, and exact description thereof, which will enable others to make and use my invention, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 is a top plan of my invention, with a part broken out to show the pawls and slide.

Figure 2 is a top plan, with half of the exterior removed to show the full interior.

Figure 3 is a section, to show the method of reducing the friction of the gear.

My invention relates to improvements in the common form of purchase for capstans.

The shell is composed of halves, concave on the interior, to hold the gear, pawls, &c., and then bolted together.

The hole in the purchase receives the end of the capstan, and has the ribs *a* to fit grooves in the same, so as to communicate the motion of the purchase or lever to the capstan.

The general operation is:

As the purchase or lever *b* is turned part of the way around, the pawls *c*, striking the teeth of the gear *d*, move it, and with it the capstan.

The lever *b* is then turned back, the pawls slipping back over the teeth of the gear, and so the operation of turning the capstan continued till the cable is wound up.

This operation I do not claim.

My invention has special reference to a method of throwing the pawls *c* out of the teeth of the gear *d*, and then holding them as long as may be desired. For effecting this, very imperfect devices have hitherto been employed.

I accomplish this by the slide *e*, which has, on the inside of one-half of the casing or casting of the purchase, a groove, in which to slide or move.

The end of the slide that touches the pawl is inclined, as shown in figs. 1 and 2.

It is kept pressed up against the inside of the casing by the spring *f* on the outside, which presses against the outside of the casing, and so keeps the slide with a proper degree of friction against the inside of the casing.

This is in order that, when moved to either position, either backward or forward, it will stay in place, and not move without being pushed by the knob *h*, which has a stock extending through the casing and united with the slide *e*. The spring *f* also covers a slot in the casing in which the stock moves.

The spring here shown is elliptical; but a hollow knob or projection can be used instead, with a spiral coiled around the stock and resting on the outside of the casing. Some elastic force must, however, be employed, because, if the slide were merely held by friction, it would soon wear loose and become unreliable.

The lower pawl has the arm *i*, extending toward the inclined face of the slide *e*.

When the slide is pushed up, as in fig. 1, its inclined end strikes the arm *i*, throws out the first pawl, and it the second, and so on through the set.

The pawls are set on pivots, having projections on their pivotal ends which enter sockets prepared for them on the inside of the casing. Thus the pawls can be thrown out of the gear, when desired, and there securely held till the slide *e* is drawn back to allow them to drop into the gear again.

A cam might be used instead of the slide.

Either a curvilinear or rectilinear motion can be used to operate the pawls.

The method of bolting the halves of the casing together is seen at K.

I relieve the friction of the gear *d* by hollowing out the casing where its lip or shoulder rests, as seen at *m*, in fig. 3.

I do not claim a lever down through the center or around the sides of the pawls of the windlass-purchase, and a hook-shape of the lever, to secure the pawls in their places when they are out of the ratchet, as set out in the case of David Thomas, received and filed July 26, 1847. This combination presents the objections which mine is intended to avoid.

I operate the pawls by a slide moving within the case, and held in position by a spring when so moved as to lift the pawls from the ratchet.

The arm or lever in Thomas's combination is apt to slip off the edge of the aperture through which it enters the case, and so check the ratchet when not desired. This my invention avoids.

What I claim as my invention, and desire to secure by Letters Patent, is—

In a purchase for capstans, the combination of the spring-slide *e* and the arm *i*, attached to one of the pawls, as set forth.

JOSEPH EDGECOMB.

Witnesses:

JOSIAH MAXCY,

S. BOWMAN.