

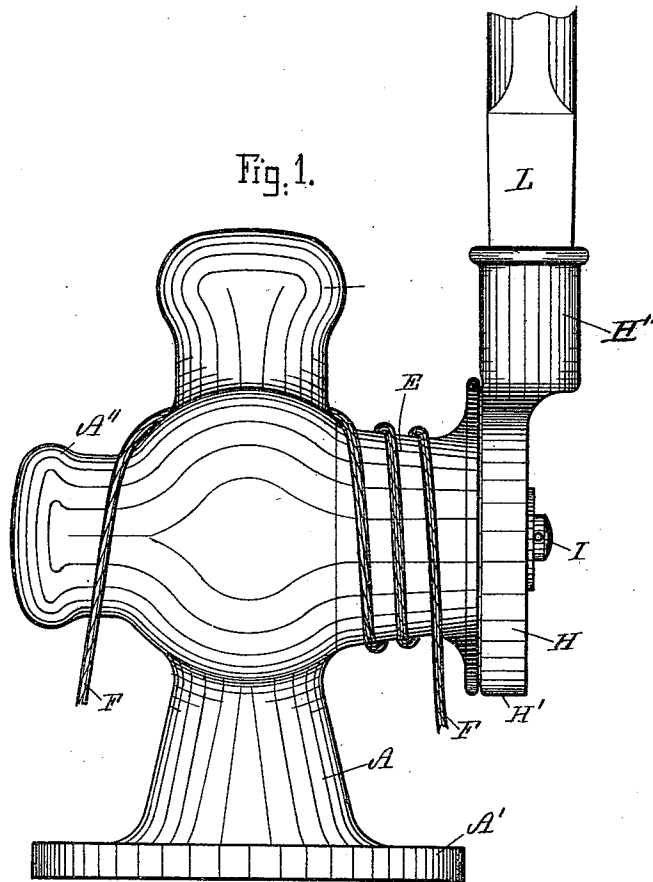
(No Model.)

2 Sheets—Sheet 1.

E. G. KELLEY.
SHEET HOLDER AND WINCH.

No. 544,260.

Patented Aug. 6, 1895.



Witnesses.

Lauritz N. Moller.
Charles A. Harris

Inventor.

Elbridge G. Kelley
by Wm. Audien, his atty.

UNITED STATES PATENT OFFICE.

ELBRIDGE G. KELLEY, OF PEABODY, MASSACHUSETTS.

SHEET-HOLDER AND WINCH.

SPECIFICATION forming part of Letters Patent No. 544,260, dated August 6, 1895.

Application filed January 14, 1895. Serial No. 534,933. (No model.)

To all whom it may concern:

Be it known that I, ELBRIDGE G. KELLEY, a citizen of the United States, and a resident of Peabody, in the county of Essex and State of Massachusetts, have invented new and useful Improvements in a Combined Sheet-Holder and Winch, of which the following, taken in connection with the accompanying drawings, is a specification.

This invention relates to an improved combined sheet-holder and winch, particularly well adapted for use on marine vessels, although it may equally well be used on piers, &c., for hauling or holding ropes, as will hereinafter be more fully described, reference being had to the accompanying drawings, wherein—

Figure 1 represents a side elevation of the invention. Fig. 2 represents a vertical longitudinal section of the same. Fig. 3 represents a cross-section on the line 3 3, shown in Fig. 2. Fig. 4 represents a vertical section on the line 4 4, shown in Fig. 2; and Fig. 5 represents a detailed side elevation of the reciprocating pawl-carrying disk or handle.

Similar letters refer to similar parts wherever they occur on the different parts of the drawings.

A represents a hollow metal post having a flange A' at its lower end adapted to be secured to the deck of a vessel or other object, according to the purpose for which the device is to be used. Within said post are arranged preferably brass or suitable bearing-rings C and D, in which is journaled the inwardly-projecting ratchet-sleeve E' of the hollow winch-drum or sheet-holder E, as shown in Fig. 2. I wish, however, to state that said rings C D may be secured to the parts E E' and adapted to run in bearings in the post A without departing from the essence of my invention.

A'' is a circular hub or side projection on the post A, around which the rope or sheet F may be laid or guided thereon before being given one or more turns around the winch-drum E, as shown in Fig. 1. In one piece with the ratchet-sleeve E' are cast a pair of ratchet or pawl disks e e', the teeth of one of said disks being arranged opposite to the spaces of the other ratchet-disk, as fully shown in Fig. 3.

g and g' are pawls loosely hung on a spindle G, secured in the upper end of the post A, as shown in Figs. 2 and 3, and adapted to interlock, respectively, with the ratchet-wheels e and e', as shown.

The outer end of the drum E is provided with an annular ring E'', having internal teeth e'', as shown in Figs 2 and 4. On the exterior of said annular ring E'' is loosely journaled the pawl-carrying disk H, having an annular flange H' loosely surrounding the annular ring E'' of the drum E, as shown in Figs. 1, 2, 4, and 5. The disk H has a centrally-perforated hub h, adapted to receive the longitudinal fastening-bolt I, which passes axially through said hub, the drum E, its ratchet-sleeve E', and side projection A'', as shown in Fig. 2. Said fastening-bolt I is preferably provided in one end with a head I' and in its opposite end with a pin I'' or other similar means for the purpose of holding the drum E in its proper position to the bearings in the post A and for holding the disk H properly connected to the end of the drum E, as fully shown in Fig. 2. The said bolt I does not serve as a bearing-spindle for the parts mentioned, but simply as a means for connecting them and preventing them from getting detached from each other. To the disk H are pivoted two or more pawls k k (which may be rights or lefts, as shown, respectively, in full and dotted lines in Fig. 4, according to the direction in which the drum E is to be rotated,) which pawls are adapted to engage with the internal teeth e'' on the drum-ring E'', as shown in Figs. 2 and 4, when the disk H is intermittently rotated.

The disk H is provided with a radial socket H'', adapted to receive a bar or hand-spike L for actuating said disk H, as shown.

The disk H is provided on its interior with wings or projections h' h', adapted to serve as rests for the pawls k k when the latter are disengaged from the toothed ring e'', as shown in the upper portion of Fig. 4.

The operation is as follows: After winding the sheet F around the rotary drum E a couple of turns, as shown in Fig. 1, the slack of such sheet can easily be taken in by one man whenever so required, and he can hold all he has pulled in by the interlocking of the pawls g g' with the ratchets e e' on said drum E, as shown

and described. While paying out the sheet it will unwind more or less on the drum E without rotating the latter. If it is desirable or necessary to put the sheet under greater tension than is possible by merely hauling it in, this can be done by applying intermittent rotation to the disk H by means of the hand-spike L, as described, by which the pawls $k k$ are made to engage with the toothed ring E'', thus imparting an increased and powerful strain on the sheet or rope that is to be hauled in.

It will thus be seen that the device is applicable both as a sheet-holder for marine vessels as well as a winch for hauling ropes with an increased and powerful strain, as circumstances may require.

What I wish to secure by Letters Patent and claim is—

The herein described sheet holder and winch, comprising a hollow metal post provided with interior bearing surfaces and having a side projection A'', a drum journaled in said post and adapted to turn upon the said bearing surfaces thereof, an interiorly toothed ring at the end of said drum, a pawl

carrying disk journaled on said ring, pawls carried by the disk adapted to engage said toothed ring, wings or projections carried by the disk and serving as rests for said pawls, a pair of ratchet wheels provided on the drum within the hollow post, the teeth of one of said wheels being arranged opposite to the spaces between the teeth of the other wheel, a pair of independent pawls arranged within said hollow post above the ratchet wheels and adapted to engage said wheels, a bolt passing through said hollow post and disk and binding the same together whereby the mechanism is entirely inclosed to be free from liability of becoming clogged and affording no obstruction for the rope to become engaged or entangled with, substantially as described.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 28th day of December, A. D. 1894.

ELBRIDGE G. KELLEY.

Witnesses:

ALBAN ANDRÉN,
COLUMBUS K. ROGERS.