

O. MELBYE.
WINCH.

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1,017,307.

Patented Feb. 13, 1912.

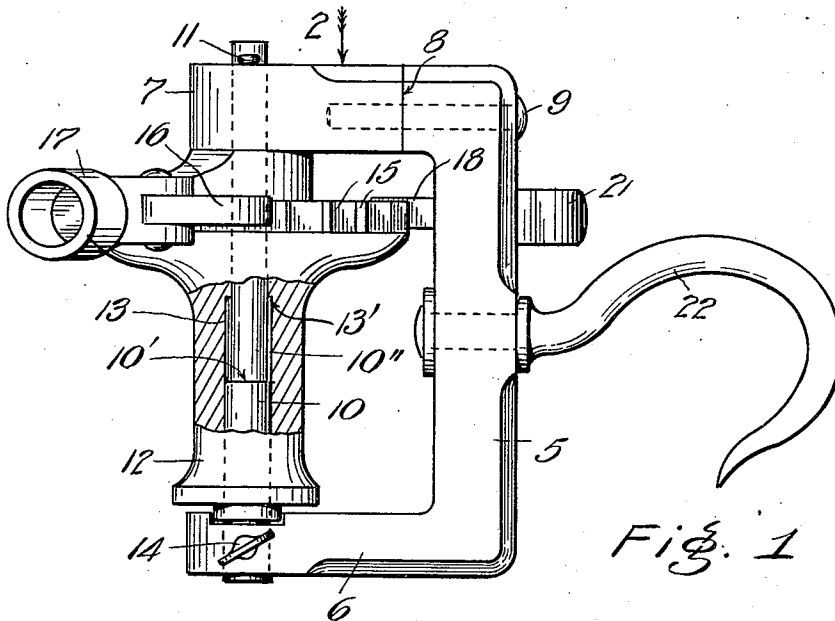


Fig. 1

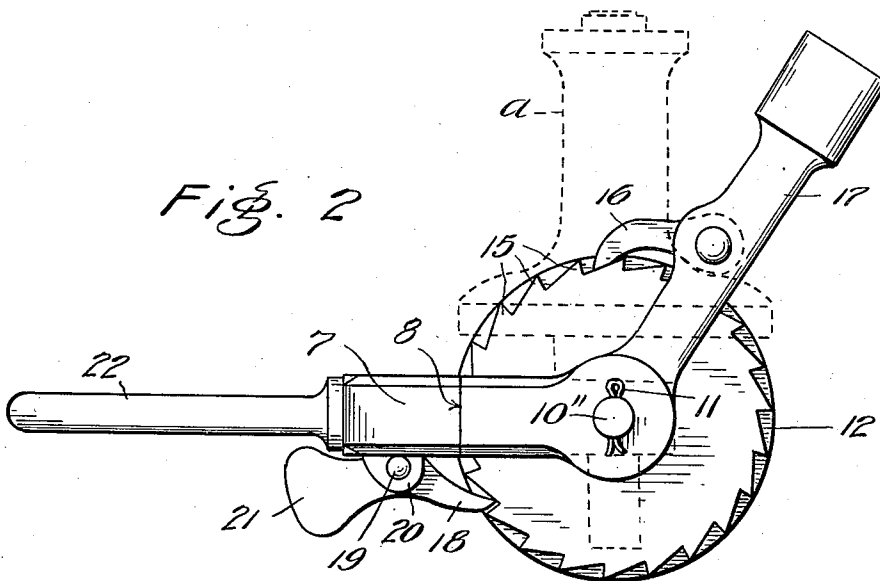


Fig. 2

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WINCH.

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To all whom it may concern:

Be it known that I, OSKAR MELBYE, a citizen of the United States, residing at Cypress Island, in the county of Skagit and State of Washington, have invented certain new and useful Improvements in Winches, of which the following is a specification.

This invention relates to winches such as utilized in fishing boats or other services where it is desirable that a line be expeditiously hauled with the application of considerable force.

In the employment of winches it frequently occurs that a hauling strain may advantageously be applied to a line remote from its end and as close to its load as convenient. Under such conditions, the practice has been to pass the end of the line several times about a winch drum, and then take in the slack by hand to reduce the number of turns which must otherwise be applied to the winch. This usually proves to be an arduous undertaking; especially with lines which have been rendered stiff by becoming water soaked.

The object of this invention is to overcome such defects, and to which end the invention consists in the novel construction and combination of parts, as will be hereinafter described and claimed.

In the accompanying drawing, Figure 1 is a plan view, partly in section, of devices embodying my invention; and Fig. 2 is an end elevation looking in the direction of the arrow 2 in Fig. 1.

The reference numeral 5 represents the transverse bar of a U-shaped frame having two arms 6 and 7 which are arranged parallel, or substantially so. The arm 6 is integral with said bar, while the other arm, 7; is divided at 8 and connected to the bar by a swivel-bolt 9 to afford rotary motion thereto about its longitudinal axis. In proximity to the extremities of said arms they are bored to furnish journal bearings for a transverse shaft 10. This shaft is provided intermediate its length with a shoulder 10' and wherefrom the diameter of the shaft is reduced, as at 10'', to the end of the shaft, or beyond the frame arm 7. A split pin 11, or an equivalent, is employed near this end of the shaft to prevent the withdrawal of the same from the adjacent arm 7.

12 is a drum which is bored to fit loosely upon the smaller end of the shaft and is counter-bored, as at 13, to similarly fit upon

the part of the shaft of greater diameter. Said counter-bore terminates at an annular shoulder 13' located so that the shaft is capable of being axially moved to sufficiently withdraw the journal of the shaft from the frame arm 6 after a clamping screw 14, which is provided for a threaded hole in this frame arm, is retracted from the shaft. At one end of the drum it is provided with peripherally disposed ratchet teeth 15 which are engageable by a pawl 16 carried by an operating lever 17 mounted upon the shaft between the drum and the frame-arm 7. A detent pawl 18 is connected by a pivotal pin 19 to ears 20 depending from the underside of the frame. Said detent pawl may be actuated by a spring; but preferably, as shown, it is controlled by a counterweight 21 which serves to elevate the pawl end into engageable position with respect to the drum teeth. The detent pawl serves to prevent the reverse turning of the drum when the pawl 16 is inoperative.

22 represents a hook secured to the frame bar 5 for securing the frame to a rigid support or with a line connection with such a support.

When a line is to be engaged about the drum the screw 14 is disengaged from the shaft 10 whereupon the latter is withdrawn from the frame-arm 6. The shaft is then swung upwardly by turning the frame-arm 7 upon its swivel connection, the bolt 9, to present the drum which is carried by the shaft to occupy the position in which it is indicated by broken lines *a* in Fig. 2. In such condition, the line may be given one or more turns about the drum which is then swung back with the shaft so that the shaft can be reinserted within the bearing of the arm 6 to be secured by screw 14. The drum is then rotated by the ratchet teeth 15 thereof being engaged by the pawl 16 to draw in the line through the medium of a handle-stick which is inserted in a socket provided in the operating lever 17. To disconnect the line, it is only necessary to withdraw the shaft from the arm 6, and then turning up the end of the drum so that the coils of the line may be lifted from the drum.

What I claim as my invention, is—

A winch, comprising a U-shaped frame formed with a transverse bar and two arms extending from the ends thereof, one of said arms being secured by a swivel to the bar to be rotatable upon its longitudinal axis, a

transverse shaft journaled in bearings provided in said arms, a drum loosely mounted upon said shaft and constructed to cooperate with the shaft to afford a limited end movement to the latter, means for securing the
5 shaft in operative position, a pawl engageable with ratchet teeth provided on the drum, a lever fulcrumed to the shaft and

carrying said pawl, and a detent pawl supported by said frame for engagement with 10 the ratchet teeth of the drum.

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Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
