

July 31, 1945.

W. L. STOVER

2,380,801

WINCH CABLE GUIDE

Filed Nov. 24, 1943

Fig. 1.

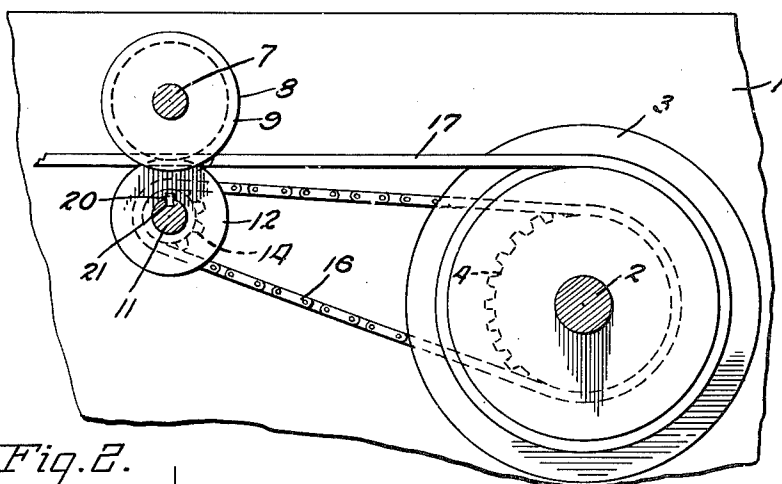


Fig. 2.

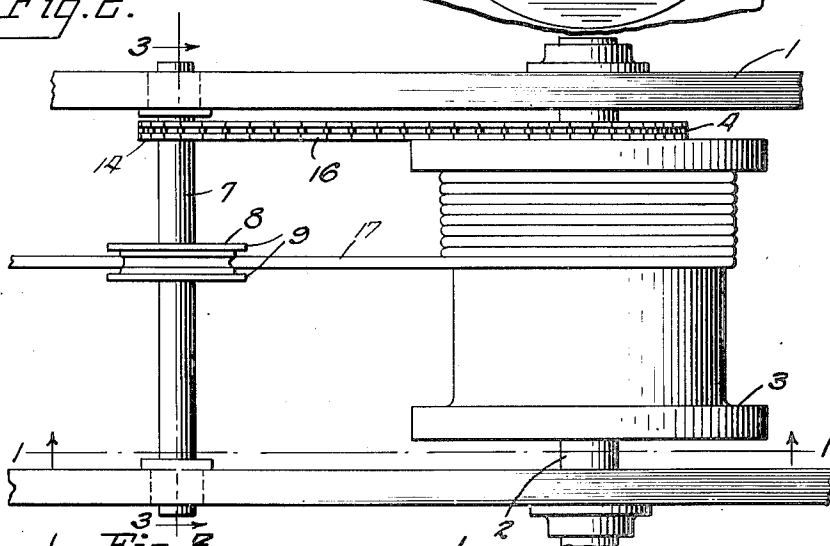
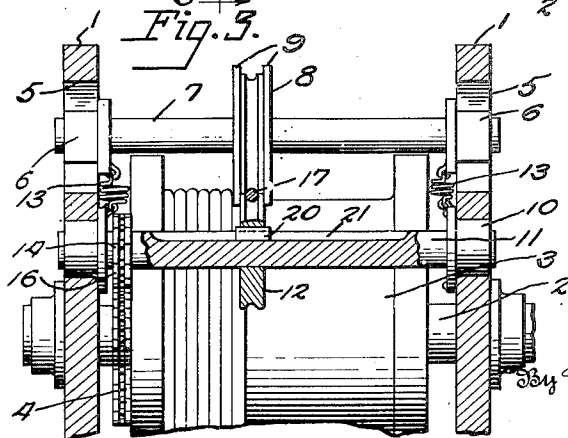


Fig. 3.



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2,380,801

WINCH CABLE GUIDE

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Application November 24, 1943, Serial No. 511,603

1 Claim. (Cl. 242-157)

This invention relates to winches and windlass machines, and more particularly to a device for controlling the slack in the cable or rope on the winding drum of such machines.

A common difficulty encountered in winches and windlasses is the uncoiling and disarrangement of the cable on the winding drum occasioned by the sudden complete release of the load either intentionally or when occasioned by a breakage of a cable, and the present invention provides a very simple and efficient control device which, while it does not interfere with the normal operation of the winch or windlass and in fact contributes to such operation by providing a guide for the cable, does effectively control the cable upon its sudden release and prevents the unwinding of the cable on the drum.

The object of the invention is to provide an improved and simplified device for controlling a cable in a winch or windlass.

The invention consists in the novel construction, arrangement and combinations of parts hereinafter more particularly described and claimed.

One sheet of drawings accompanies this specification as part thereof, in which like reference characters indicate like parts throughout.

Figure 1 is a fragmentary vertical cross-section taken through a windlass on the line 1-1 of Figure 2;

Figure 2 is a fragmentary plan view of a windlass embodying the present invention by omitting the drive and other mechanism not material to this invention;

Figure 3 is a transverse cross-section taken on line 3-3 of Figure 2 broken away in parts to illustrate the construction.

The invention is illustrated herein as applied to a diagrammatic representation of a winch or windlass having two spaced frame members 1-1 in which is journaled the drum shaft 2 carrying the drum 3. The driving mechanism for the shaft 2 is not shown and any suitable winch or windlass mechanism can be utilized.

For the purpose of the present invention, the drum 3 is provided at one end with a sprocket wheel 4 carrying a chain 16 which also engages a sprocket 14 fixedly secured to a shaft 11 rotatably mounted at journals 10-10 carried by the frame members 1-1. The shaft 11 is positioned

parallel with and spaced from the drum shaft 2 and is provided with a longitudinally extending groove 21. A pulley 12 is slidably and nonrotatably mounted on the shaft 11, being keyed thereto as by key 20 sliding in groove 21.

Above the journals 10, the frame members 1 are provided with vertically extending through slots 5-5 in which are slidably positioned journals 6-6 carrying a shaft 7 upon which is slidably and rotatably mounted a pulley 8 formed with peripheral flanges 9-9 spaced apart sufficiently to embrace a peripheral portion of the pulley 12, as illustrated in Figure 3, so as to frictionally engage the cable 17 extending from the drum 3. The shaft 7 is resiliently drawn toward the shaft 11 by means of springs 13-13 connecting the journals 6 and 10.

It will thus be observed that the pulleys 12 and 8 will be driven from the drum 3 in the normal operation of the windlass or winch so that the cable 17 will be payed out and drawn in in the normal operation of the device, but will be held against back lash in event of the sudden release of the load on the end of a cable. It will further be noted that the combined pulleys 8 and 12 being freely slidable transversely of the drum operate to guide the cable and thus contribute to the normal operation of the device.

Various modifications in the construction and arrangement of the parts will readily suggest themselves to those skilled in the art but within the scope of the present invention, as claimed.

Having thus described my invention, I claim:

A winch comprising a frame, a winch drum pivotally mounted in said frame, a shaft rotatably mounted in the frame parallel with the axis of the drum, a pulley slidably and nonrotatably mounted on said shaft, means for driving said shaft from the drum, shaft bearings slidably mounted in the frame, a second shaft rotatably mounted in said bearings, spring means drawing the slidable bearings toward the first shaft, a pulley slidably mounted on the second shaft, said pulleys proportioned and arranged so that a peripheral portion of one will nest within the adjacent peripheral portion of the other so that said pulleys will slide together on their respective shafts and frictionally engage a portion of the winch cable.

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