Nov. 5, 1929. A. A. SHANKLIN 1,734,832

ROPE GUIDE FOR EXTRICATING MACHINES

Filed April 2, 1928

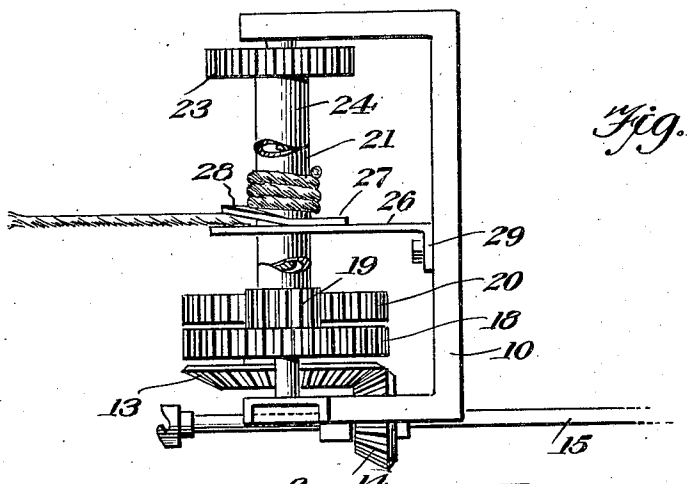


Fig. 1.

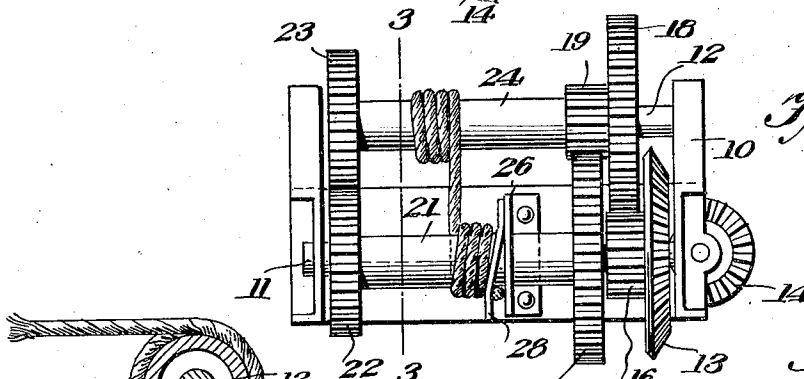


Fig. 2.

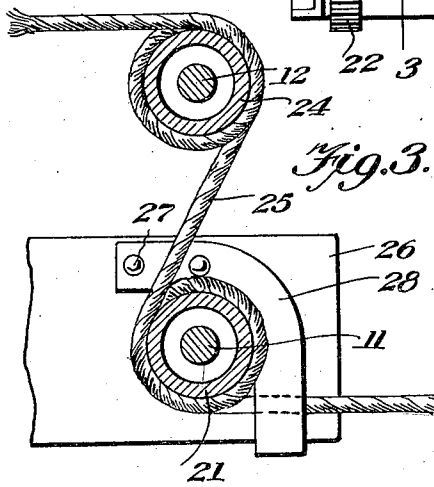


Fig. 3.

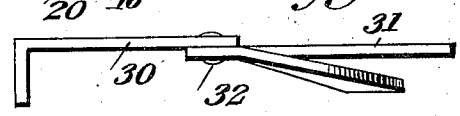


Fig. 5.

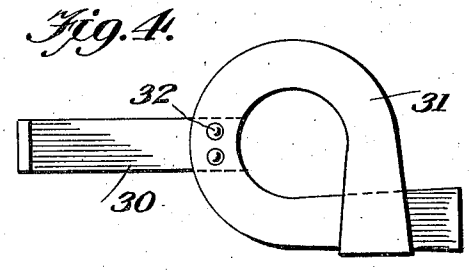


Fig. 4.

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UNITED STATES PATENT OFFICE

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ROPE GUIDE FOR EXTRICATING MACHINES

Application filed April 2, 1928. Serial No. 266,813.

This invention relates to cable guiding devices for use in guiding a cable as the latter is being wound upon a drum or shaft, the invention being especially adapted for use in connection with pulling or extricating machines or apparatus of the type disclosed in Patent No. 1,590,446, granted to me June 29, 1926.

An object of the present invention is to provide a device which may be positioned to guide a rope or cable as the latter is being wound upon a drum to prevent the convolutions from becoming crossed and thus lock the rope or cable so as to interfere with the proper operation of the machine or apparatus.

Another object of the invention is to provide a device of the above character which is simple of construction, reliable in operation, and may be readily attached in position for use.

With the above and other objects in view, the invention further includes the following novel features and details of construction, to be hereinafter more fully described, illustrated in the accompanying drawing, and pointed out in the appended claims.

In the drawing:—

Figure 1 is a plan view showing a portion of a pulling apparatus with the invention applied.

Figure 2 is a front view of the same.

Figure 3 is a section on the line 3—3 of Figure 2.

Figure 4 is an elevation showing a slightly different form of the invention.

Figure 5 is an edge view of the form of the invention shown in Figure 4.

Referring to the drawing in detail wherein like characters of reference denote corresponding parts, the reference character 10 indicates a frame which may be mounted in any suitable manner. For example, the frame may be supported by the frame of an automobile, as in my patent above referred to. Supported in the frame 10 are shafts 11 and 12 and mounted for free rotation upon the shaft 11 is a beveled gear 13, which is engaged and driven by a beveled pinion 14 mounted upon a drive shaft 15, which may receive its power from any suitable source. The hub of the gear 13 carries a pinion 16 which drives a gear 18 freely rotatable upon the shaft 12. This last mentioned gear has its hub formed with a pinion 19 which engages a gear 20 fast with a drum 21 which is rotatable upon the shaft 11. The drum 21 carries at its other end a gear 22 which engages a gear 23 which is fast upon the end of a drum 24, the latter being rotatable upon the shaft 12. The foregoing is the type of operating mechanism disclosed in my mentioned patent and forms no part of the present invention, as any suitable means may be provided for operating the drum or drums.

Wound upon the drums 21 and 24 is a rope or cable 25 which is first given several turns around the drum 21 and then given several turns around the drum 24, but it has been found in practice that sometimes the convolutions upon the drum 21 will become crossed and the cable locked, especially if the pull is direct. To overcome this, the present invention provides a rope guide which as shown in Figures 1, 2 and 3 of the drawing includes a plate 26 which is provided with an opening for the passage of the drum 21.

Secured to the plate 26 as shown at 27 is one end of an arm 28. This arm is curved and extends over the drum and has its opposite free end spaced from the plate so as to provide a guide for the cable. The arm 28 is preferably of resilient character. If desired, one end of the arm may be provided with a flange which is secured to a sationary part of the frame 10 as shown at 29.

If desired, the plate 26 may be of elongated shape as shown at 30 in Figures 4 and 5 and the arm which is indicated at 31 is secured intermediate its ends to the plate as shown at 32. The arm 31 is curved as shown so as to provide for the passage of the drum 21, and the ends of the arm overlap and are spaced from one another so as to receive and guide the cable between the overlapped portions of the arm. The arm 31 is also preferably made of resilient material.

The invention is susceptible of various changes in its form, proportions and minor details of construction and the right is herein

reserved to make such changes as properly fall within the scope of the appended claims.

Having described the invention what is claimed is:—

1. In combination with an apparatus including a rotatable drum and a cable wound thereon, a guide secured to a sationary part of the apparatus, and a curved arm included in the guide and extending over the drum for engagement by the cable.

2. In combination with an apparatus including a rotatable drum and a cable wound thereon, a plate secured to a stationary part of the apparatus and having an opening to receive the drum, and an arm secured to the plate and extending over the drum with a portion of said arm spaced from the plate to permit of the passage of the cable.

3. In combination with an apparatus including a rotatable drum and a cable wound thereon, a plate secured to a sationary part of the apparatus and having an opening to receive the drum, and a resilient arm secured to the plate and extending over the drum with a portion of said arm spaced from the plate to permit of the passage of the cable.

4. In combination with an apparatus including a rotatable drum and a cable wound thereon, a plate secured to a stationary part of the apparatus and having an opening to receive the drum, and a resilient curved arm having one of its ends secured to the plate and extending over the drum and having its free end spaced from said plate to permit of the passage of the cable.

In testimony whereof I affix my signature.

ALECK A. SHANKLIN.