H. L. & F. W. ZIMMERMAN.

CABLE TAKE-UP.

APPLICATION FILED DEC. 29, 1913.

1,252,071. Patented Jan. 1, 1918.

Fig. 3.

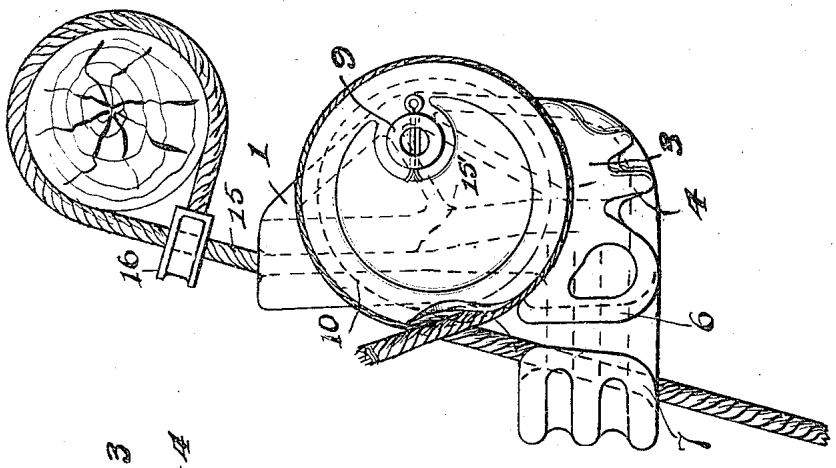


Fig. 4.

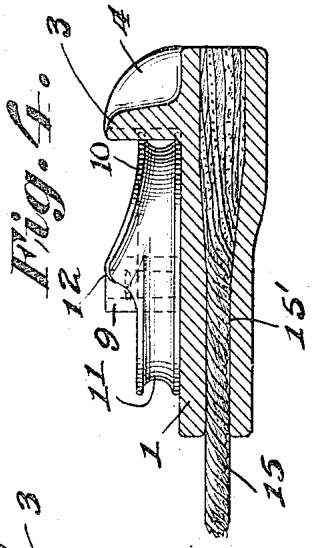


Fig. 2.

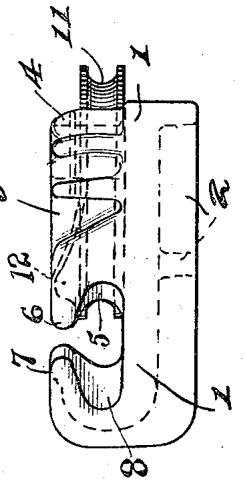
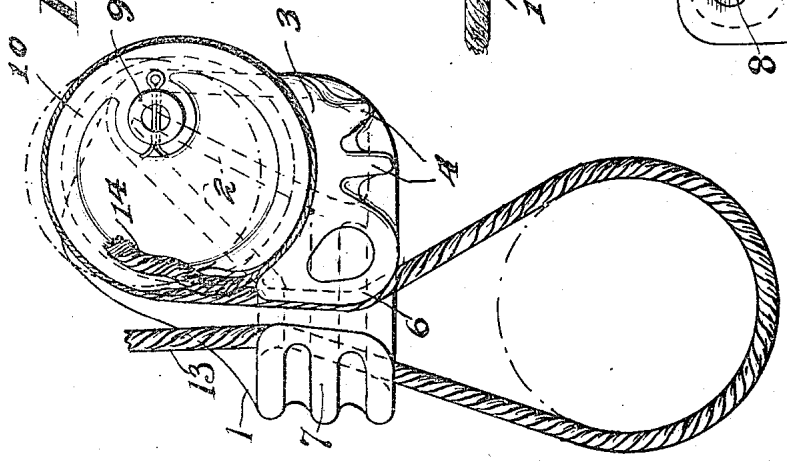


Fig. 1.



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UNITED STATES PATENT OFFICE.

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CABLE TAKE-UP.

1,252,071. Specification of Letters Patent. Patented Jan. 1, 1918.

Application filed December 29, 1913. Serial No. 809,252.

To all whom it may concern:

Be it known that we, HENRY L. ZIMMERMAN and FREDRICK W. ZIMMERMAN, citizens of the United States, residing at Lone Tree, in the county of Johnson and State of Iowa, have invented certain new and useful Improvements in Cable Take-Ups; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in cable take-ups, and particularly to such as are characterized by the utilization of cable cam gripping devices.

The object in view is the adaptation of such a take-up for enabling direct application of intermediate portions of the draft cable to the stump or other article to be drawn.

A further object in view is the provision, in a take-up of the class mentioned, of means enabling either direct application of an intermediate portion of the draft cable or application of a supplemental cable to the article to be drawn.

With these and further objects in view, as will in part hereinafter appear and in part be stated, the invention comprises certain novel constructions, combinations and arrangements of parts as will be herein specified and claimed.

In the accompanying drawing,—

Figure 1 is a plan view of an embodiment of the present invention.

Fig. 2 is a front elevation thereof.

Fig. 3 is a similar view of another embodiment of the invention.

Fig. 4 is a vertical section taken along the axis of the bore for the auxiliary or hitching cable, a fragment of said cable being seen in elevation.

Referring to the drawing by numerals, 1 indicates a bottom plate which has its under portion strengthened by ribs or flanges 2, 2. From the upper face of the plate 1 upstands an arcuate flange 3 strengthened by ribs or fillets 4, 4. The flange 3 terminates adjacent one side of plate 1 in an enlarged rounded end portion formed with a transverse groove 5 producing an overhanging portion or hook 6. The plate 1 is formed with an outstanding portion projecting laterally beneath the hook 6 and terminates in a hook 7 extended back toward and facing the hook 6, the hook 7 being formed with a groove 8 opposing and in the same planes with the groove 5. The bight portions of the hooks 6 and 7 are rounded throughout the length of the grooves 5 and 8 for presenting no sharp or projecting corners, and the wall of the groove 8 is inclined toward that of groove 5 as it extends rearwardly so as to produce a converging passage-way between the two hooks, as clearly indicated in dotted lines in Fig. 1. The parts 6 and 7 are preferably formed integral with plate 1, as by being cast therewith, but obviously the parts may be otherwise constructed when preferred.

An appropriate area of the upper face of bottom plate 1 in the rear of flange 3 is formed flat and smooth and is provided with an upstanding, preferably integral, bearing shaft 9, which may be formed tubular for reduction in weight and the saving of material. A cam 10 is journaled on the shaft 9 and consists of an eccentrically mounted peripherally grooved sheave or pulley, the eccentricity of the mounting being proportioned to assure effective conformity of the circumference of the pulley to the concavity of the flange 3 for gripping the cable between the pulley and the flange. The peripheral groove 11 of the cam 10 is annular but at one point is provided with a branch or laterally extending groove portion 12 formed by an appropriate upstanding flange extending from the upper face of the cam and formed with the concavity producing the branch groove 12.

In operation, the draft cable 13, which extends from a winding drum or other draft apparatus not illustrated, is disposed in the groove 8, looped about the stump or other article to be drawn, disposed in the groove 5 and then passed about the groove 11 and out through the branch groove 12 so that the terminal portion 14 of the cable 13 extends entirely free of the apparatus, and while said terminal portion has been shown in the drawing as a mere end it may actually extend for any length as, for instance, in practice, from fifty to one hundred feet, according to the particular intermediate point at which the present improved take-up is applied to the draft cable. As soon as the parts are thus disposed, the cable 13 is subjected to draft which first becomes taut and

in doing so causes the cam 10 to swing upon its journal 9 and firmly grip the portion of the cable extending along the flange 3 against said flange. Further draft on cable 13 will then produce a pull on the stump or other article surrounded by the loop of cable 13 extending beyond the take-up, as clearly indicated in Fig. 1.

Thus it will be seen that by this invention it is possible to dispense with an auxiliary or hitching cable, but as indicated in Figs. 3 and 4 it is sometimes preferable to provide the hitching cable as, for instance, when it is inconvenient or impracticable to pass the intermediate portion of the draft cable about the article to be drawn, for example, about a standing tree. In Figs. 3 and 4 is illustrated an embodiment corresponding exactly in every detail, excepting the connection for the hitching cable, with the structure set forth above, so that the same reference numerals have been applied and the same description is applicable. The connection for the hitching cable consists merely of a bore 15′ formed in the material of the bottom plate and flaring forwardly, into which extends the end portion of the hitching cable 15. The said end portion has its strands frayed within the enlargement of the bore and interfilled with Babbitt or other appropriate metal. The opposite or free end of the cable 15 is provided with a cable hook 16 so as to enable ready connection of the free end of the cable with an intermediate portion thereof after the cable has been passed about a stump or other article. It will thus be seen that when using the structure set forth in Figs. 3 and 4 the draft cable may be utilized as above set forth, or, when it is found impracticable or otherwise undesirable to loop the draft cable about the stump to be drawn, the hitching cable may be utilized, and in that event the draft cable will be merely extended past the hook 6 in the groove 8 and not looped back along the groove 5, although, of course, such return loop may be employed if occasion should demand merely by the interposition of some article engaged by the loop and disposed to prevent the loop from escaping through the channel between the hooks 6 and 7.

Regardless of whether the auxiliary or hitching cable is utilized, the gripping and releasing of the main cable is the same and is effected by applying the cable about the cam 10 when the cam is swung outwardly to the position indicated in dotted lines in Fig. 1, and then swinging the cam back to its full line position whereat the cable is gripped between the flange 3 and the cam, the pull on the main cable serving to move the cam nearer the flange 3 and thus increasing the gripping capacity of the cam. The release of the cable is accomplished merely by slacking away that portion of the main cable extending from cam 9 past hook 6 and swinging the cam out to the said dotted line position, whereupon the cable can be easily unwrapped from about the cam.

What we claim is:—

1. In a cable take-up, the combination of a plate provided with two separated upstanding parts each of which has an inwardly facing longitudinal rope groove, and independent means carried by the plate for engaging a rope leading from one of the grooves, the said rope engaging means being separate from and adapted to retain the rope independently of either groove.

2. In a cable take-up, the combination of a plate having at one end and near one side, a pair of separated upstanding parts each provided with a longitudinally extending groove facing the opposite part and adapted to receive a looped rope in the grooves, one of said parts extending to the opposite side of the plate and being curved to provide an arcuate stop flange, and a disk eccentrically pivoted to the opposite end of said plate and at said opposite side thereof for contact with the stop flange and adapted to receive one end of said rope loop thereabout as the latter emerges from the adjacent groove for binding the cable against the stop flange independently of the groove.

3. In a cable take-up, a plate, cable gripping means carried thereby, an outstanding hook portion disposed at one side of said gripping means, the plate extending beyond said hook, and a hook extending from the last-mentioned portion of the plate toward the first-mentioned hook and forming a restricted passage-way therebetween.

4. In a cable take-up, a plate, cable gripping means carried thereby, an outstanding hook portion disposed at one side of said gripping means, the plate extending beyond said hook, and a hook extending from the last-mentioned portion of the plate toward the first-mentioned hook and forming a restricted passage-way therebetween, the bights of the respective hooks being shaped to form a converging passage-way between the hooks.

In testimony whereof we affix our signatures in presence of two witnesses.

HENRY L. ZIMMERMAN.
FREDRICK W. ZIMMERMAN.

Witnesses:
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LEIB DONALDSON.