Nov. 5, 1929. R. BANKS 1,734,610

BULL HOOK DEVICE

Filed Nov. 22, 1928

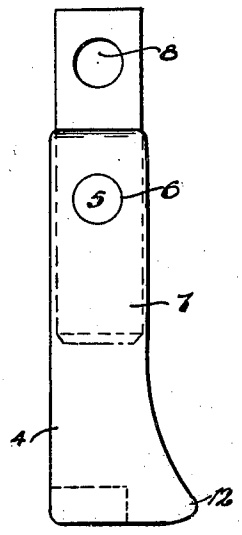


Fig. 1.

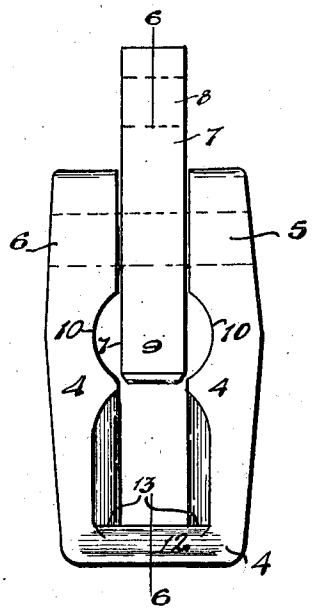


Fig. 2

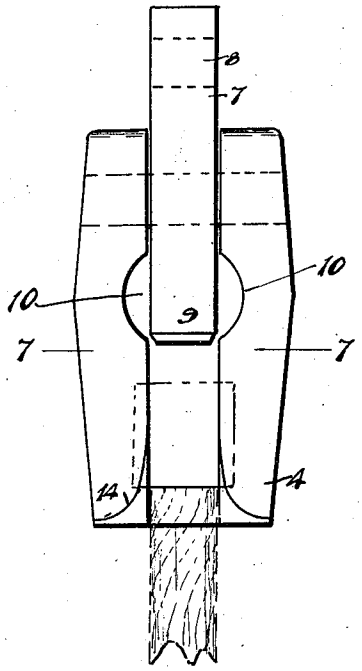


Fig. 3

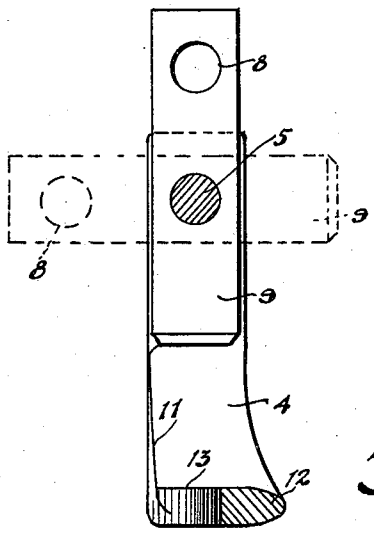


Fig. 4.

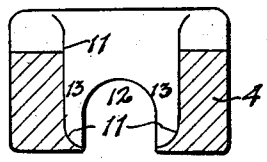


Fig. 5

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UNITED STATES PATENT OFFICE

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BULL-HOOK DEVICE

Application filed November 22, 1928. Serial No. 321,187.

This invention relates to a bull hook device for use in logging operations and like purposes where a cable attachment requires to be rapidly made and when so made has a self-locking function and cannot become unintentionally released.

The principal objects of this invention are to provide a device of this character which is of simple and robust form so as to properly meet the rough conditions always met with in such work; to avoid screws, springs and other mechanical elements which are weak, uncertain or are not adapted to practically instantaneous adjustment or application; and to enable such devices to be made and practically completed from castings requiring but a minimum of fitting or other mechanical work to place on the market.

With the above and other objects in view I use for my device as a principal member a U-shaped loop with a secured pivot pin connecting the open ends of the member. The loop end is on one side channeled to engage a cable, the end of which is secured to a thimble in the usual way, the thimble lying inside the loop so that the attached cable occupies the aforesaid channel which forms a guide thereto.

The interior longitudinal sides of the loop members are so shaped as to slightly close in at the edges adjacent the loop end and on the channelled side thereof thereby preventing the thimble from passing between them and so providing a cradle-like support for it.

Between the extremity of the thimble and the transverse pivot pin the loop member is, however, enlarged to freely admit the thimble being passed therethrough in a direction right-angular to that of the axis of the pivot pin.

By this arrangement the end of the cable with its thimble secured thereon may be passed over the channellel side of the loop member and threaded through the said enlargement, thus bringing the thimble on to the top side of the cradle support when, if the cable is made taut and engages the channel, the thimble end engages the inside surface of the end of the loop as an abutment.

This feature is operated almost instantaneously and its corollary which makes the bull hook a self-locking device consists in a pivoted shackle bar which also forms the keeper. Immediately any strain comes upon the device through the cable on the one hand and the shackle on the other the keeper is brought into alignment with the direction of the strain and in that position it is impossible for the thimble to become released from the loop member.

The invention is particularly described in the following specification, reference being made to the drawings by which it is accompanied, in which:

Figure 1 is a side elevation; Figure 2 is a front elevation; Figure 3 is a back elevation; Figure 4 is a vertical cross section taken on line 6—6 of Figure 2 with shackle in full; Figure 5 is a cross section taken on line 7—7 of Figure 3.

In these drawings the numeral 4 indicates the principal member of the device which is substantially of U-shaped form and has secured to it adjacent the open end the pivot pin 5 by which an approximately square-ended link is produced.

The pin in this case is riveted to the loop member at the countersunk heads 6. A shackle bar 7 pivots on the pin 5 and carries on its outward end an aperture 8 for the insertion of a shackle pin as usual, and the bar is extended inwardly of the member on the other side of the pivot at 9 to act as a keeper or locking device, the function of which will appear later.

The device is of course, used in connection with a cable on the extremity of which a thimble is firmly secured in the usual manner, and the invention resides largely in the means whereby the thimble end of a cable may be rapidly attached to or released from the bull hook device and the parts 10, 11, 12 and 13 are concerned with this detail of the invention.

On one side of the member 4 a channel 12 is formed to receive and form a guide for the cable and on the opposite side of the member 4 and immediately behind the loop portion a recess is formed within which a thim-

ble may lie so that its end surface may abut against the inner surface 13 of the loop.

The thimble recess is formed by closing in on the channelled side the edges of the sides 11, as shown in Fig. 3, so that they are the same distance apart there as the width of the channel 12, thus admitting the cable but not the thimble, for which they form a cradle support. Immediately beyond the recess formed by the surfaces 11 and 13 is the parallel sided aperture 10 which is of a size to freely admit of the thimble being passed from one side to the other of the device.

In operation, assuming the device to be free of the cable at both ends, the pivoted shackle bar 7 may swing into a position right-angular to that shown in the drawings, thus clearing the aperture 10 from the end 9 of the shackle bar.

A thimble ended cable may then be inserted through the aperture 10 and from the same side of the member 4 as the channel 12 until the thimble is clear of the aperture 10 when the cable may be strained taut, causing the thimble to engage the recess and take its abutment on the inner surface 13 of the loop member 4.

When in this position the thimble being free of the aperture 10, the end 9 of the shackle bar will, on the instant that any strain is applied to it from a cable assume the position shown in Fig. 1, thus locking the thimble against any releasing action.

Having now particularly described my invention, what I claim as new and desire to be protected in by Letters Patent, is:

1. A bull hook device comprising, an open-ended loop member of substantially U-shaped form, opposite and corresponding rivet apertures adjacent the open ends of said loop member and adapted to receive a pin secured therein so as to form a complete link, an open channel in the loop end of said member on one side thereof and centrally disposed on the longitudinal centre line of said member, the interior longitudinal sides of said loop member adjacent its loop extremity being adapted to form a supporting recess for a thimble whereby the said thimble may be inserted from one side of the said member to lie in the said recess but cannot be inserted from the other side, the inner surface of the loop portion of said loop member and forming the end of said recess being right-angular to said centre line and thereby adapted to form an abutment for the end of a thimble secured to a cable, a pivot pin uniting the open ends of said loop member and engaging the two said apertures therein, the intervening space between the two legs of the said loop member beyond the said recessed portion being enlarged to freely admit the passage therethrough of a thimble whereby the extremity of a thimble ended cable may be passed from the channelled side through said enlargement so that the thimble may lie supported in said receptacle, with its end abutting the inner surface of said loop and the cable may lie within said channel, a shackle bar pivoting on said pin and extending within said loop member so as to block said enlargement and having an aperture adjacent its outer end for the reception of a shackle pin.

2. A bull hook device comprising, an open ended loop member of substantially U-shaped form, opposite and corresponding rivet apertures adjacent the open ends of said loop member and adapted to receive a pin secured therein so as to form a complete link, a dished receptacle for a thimble on one side of said loop member and centrally disposed of and adjacent the inner side of the loop of said member, a thimble aperture between the limbs of said loop member and adjacent said recess whereby a thimble may be passed from one side of said loop member to the other side, a channel on one side of the loop of said member, said channel being centrally disposed on the longitudinal centre line of said loop member and on that side of same remote from the recessed side, a pivoted shackle bar between the limbs of said loop member having an extension projecting between the limbs of said loop member and adaptable to block the passageway through said thimble aperture.

In testimony whereof I affix my signature.

ROBERT BANKS.