Feb. 21, 1928. 1,660,258

T. CUSHING

BULL HITCH

Filed March 2, 1927

Fig. 1.

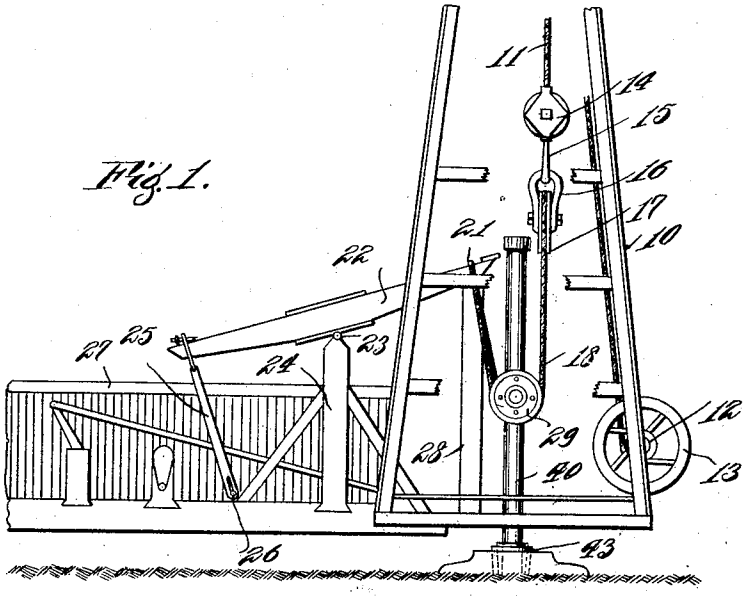


Fig. 2.

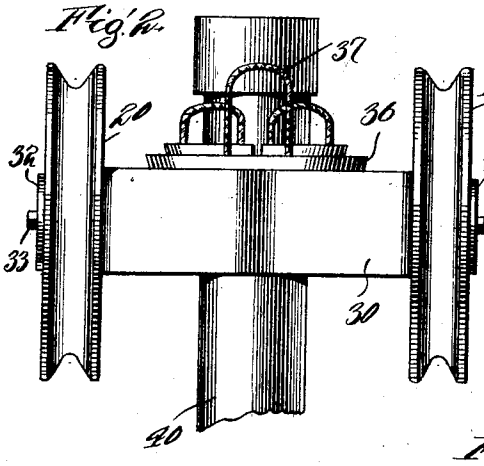


Fig. 3.

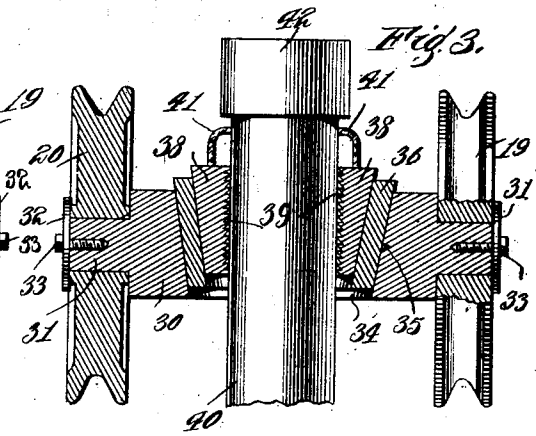
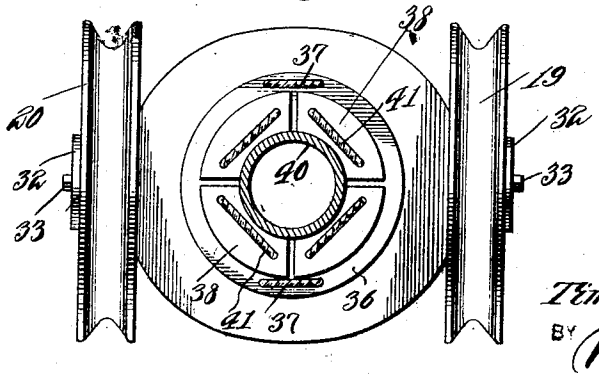


Fig. 4.



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UNITED STATES PATENT OFFICE.

TIM CUSHING, OF BRISTOW, OKLAHOMA.

BULL HITCH.

Application filed March 2, 1927. Serial No. 172,174.

This invention relates to bull hitches for use in oil wells.

An object of the invention is the provision of a device which includes a travelling spider, a spreading pulley and bail for bringing the dead line in alinement with the sheave pulleys on the travelling spider by which a plurality of sections of pipe may be withdrawn and removed from an oil well.

Another object of the invention is the provision of a bull hitch which may be applied to a projecting section of a pipe line of an oil well for gripping the same and raising the pipe by an elevator. The section of pipe being raised above the ground, said section is unscrewed and removed, the depending sections of the pipe line which are still in the well being retained against falling by a clamp embracing the pipe at the ground section.

This invention will be best understood from a consideration of the following detailed description in view of the accompanying drawings forming a part of the specification; nevertheless, it is to be understood that the invention is not confined to the disclosure, being susceptible of such changes and modifications which shall define no material departure from the salient features of the invention as expressed in the appended claim.

Figure 1 is a side view in elevation of the device constructed according to my invention,

Figure 2 is a side view of a bull hitch shown applied to the end of a pipe,

Figure 3 is a vertical section of the device shown in Figure 2,

Figure 4 is a plan view of the device shown in Figure 2.

Referring more particularly to the drawings, 10, generally designated a derrick normally equipped at its upper end with grooved pulleys over which a wire cable 11 is trained. The lower end of the cable is fixed to an axle or a drum 12 which is rotated by means of a wheel 13 for winding the cable on the drum or axle and for elevating the tackle 14. Links 15 and 16 are connected together and have pivotal connections, respectively, with the tackle 14 and with a pulley 17.

A continuous band of cable 18 is trained over the pulleys 17 and over a pair of bull wheels 19 and 20. The cable 18 is termed a dead line and has one portion as shown at 21 looped over the end of a walking beam 22. This walking beam is pivoted at 23 on a post 24 and one of the beams is maintained in a predetermined position by means of a strap 25 pivoted at 26 on a frame 27. The end of the beam which is engaged by the dead line 18 is elevated by means of a rail or post 28.

The bull hitch, generally designated by the numeral 29 consists of a circular disk 30 having diametrically disposed trunnions 31 upon which are rotatably mounted bull wheels 19 and 20. Washers 32 are held in place by means of screws 33 against the outer face of hub portions of the wheels 19 and 20 for maintaining said wheels on their respective axles 31.

The central portion of the disks 30 is provided with an opening 34 which has its side walls inclined as shown at 35 to receive a conically shaped slip ring 36. Wire handles 37 located at diametrically opposite points on the ring are adapted to facilitate the removal of said ring from the opening 34 in the plate or disk 30. Segmental slips 38 having wickers or teeth 39 are adapted to be received within the conically shaped ring 36 so that the wickers will engage a pipe section 40 and clamp the pipe section from downward movement. Each of the slips are provided with handles 41 which may be readily grasped for the removal of the slips from the ring 36. It will be seen by this construction that there is no necessity of depending upon the enlarged portions 42 of a pipe section which forms part of the joint between the section to provide a sufficient shoulder for grasping the pipe section when the pipe sections are withdrawn from the wheel. It is also unnecessary with the present type of bull hitch to screw nipples on to the pipe section in order to aid in removing said sections from the wheel.

As the sections are removed by the raising

of the bull hitch 29, a lower clamp shown in dotted lines at 43 embraces the pipe section 40 at all times and is adapted to automatically grip the pipe section when the bull hitch is released or the dead line 18 is lowered.

I claim:

A device of the character described comprising a walking beam having one end fixed against movement, a dead line around one end of said walking beam, grooved pulleys, said dead line being trained around said pulleys, an elevator pulley, around which the dead line is continuous, a tackle supporting said elevator pulley and means for hoisting the tackle.

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