April 12, 1932. S. J. MONTGOMERY 1,854,055

PULLING JACK

Filed Feb. 20, 1931

Fig. 1.

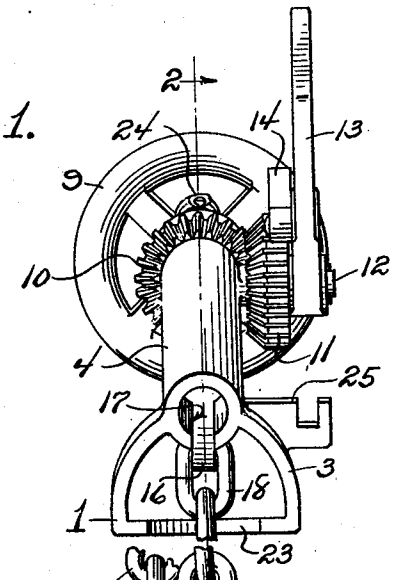
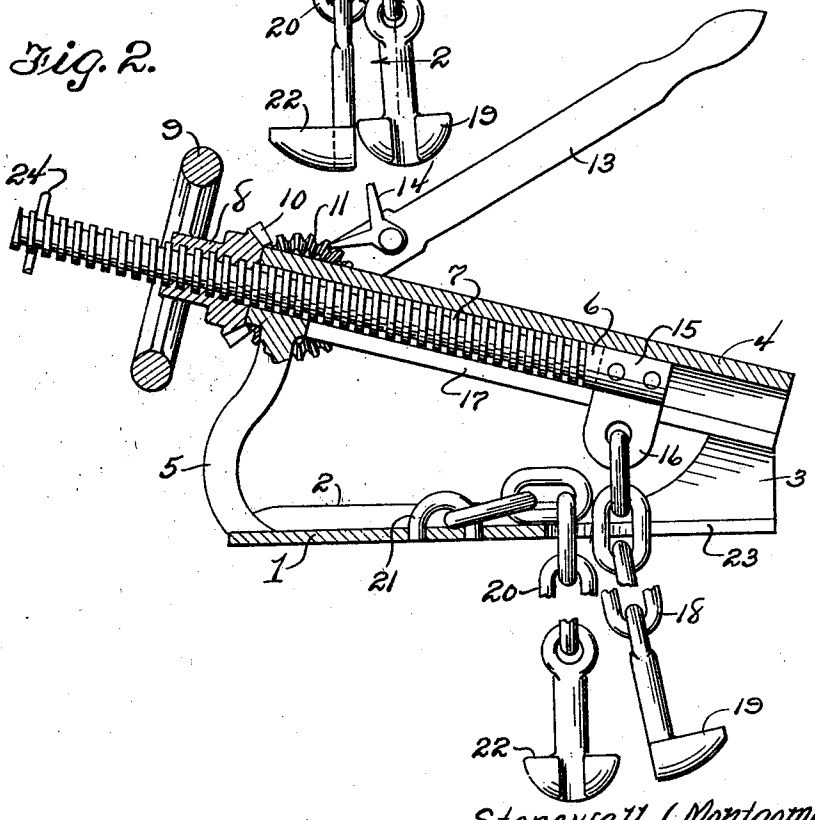


Fig. 2.



Stonewall J. Montgomery INVENTOR

BY C. L. Evans

ATTORNEY

Patented Apr. 12, 1932 1,854,055

UNITED STATES PATENT OFFICE

STONEWALL J. MONTGOMERY, OF CEDAR VALE, KANSAS

PULLING JACK

Application filed February 20, 1931. Serial No. 517,286.

This invention relates to improvements in pulling jacks adaptable for many purposes, such as, to move heavy loads, to tighten chains and the like around objects that may be the load on a truck, or the tying together of oil well equipment, lumber and the like or the moving of stalled vehicles, and has for the primary object, the provision of a device of the above stated character which will act with a great amount of force or strength with the expenditure of a minimum amount of effort on the part of the operator.

Another object of this invention is the provision of means, whereby the device may be easily and quickly adjusted to remove surplus slack in a tying or towing chain, placing the latter with sufficient tautness so that when the actuating member is manually moved, the chain may be made as taut as desired without undue effort on the part of the operator.

A further object of this invention is the provision of a device of the above stated character which is of a construction capable of affording maximum strength with compactness that will provide the greatest ease in handling from one place to another, which will be simple, durable and efficient and which may be manufactured and sold at a comparatively low cost.

With these and other objects in view, as will become more apparent as the description proceeds, this invention consists in certain novel features of construction, combination and arrangement of parts, to be hereinafter more fully described and claimed.

For a complete understanding of my invention, reference is to be had to the following description and accompanying drawings, in which

Figure 1 is an end elevation illustrating a jack constructed in accordance with my invention.

Figure 2 is a sectional view taken on the line 2—2 of Figure 1.

Referring in detail to the drawings, the numeral 1 indicates an elongated base provided with side marginal flanges 2 that are extended at one of their ends to provide arcuately curved supporting and guide arms 3 formed integral with one end of a tubular member 4. A combined handle and arm 5 is formed integral with the base 1 and tubular member 4 and is of a greater height than the arms 3 for supporting the tubular member in an inclined position as shown in Figure 2.

A feed rod 6 is slidably mounted in the tubular member 4 and is provided with feed threads 7 meshing with corresponding feed threads in a sleeve 8 at the upper end of the tubular member 4. A hand wheel 9 is formed integral with the sleeve 8 whereby the latter may be quickly rotated in either direction for the purpose of adjusting the rod 6 within the tubular member 4. A portion of the sleeve 8 is formed to provide a gear 10 meshing with a gear 11 journalled on a shaft 12 carried by the upper end of the tubular member 4. An operating lever 13 is journalled on the shaft 12 as clearly shown in Figure 2 and is provided with a double dog 14 for the purpose of rotating the gear 11 in opposite directions by the oscillation of the lever 13. The direction of rotation of the gear 11 depends upon which end of the dog 14 is engaged therewith.

A sleeve 15 is secured to the lower end of the rod 6 and is provided with an apertured ear 16 extending through a slot 17 formed in the lower wall of the member 4 and has a chain or flexible element 18 connected thereto and which carries a claw hook 19 to engage with one of the links of a tying or towing chain (not shown). The base 1 is anchored in any desired manner preferably by securing an anchor chain about the combined handle and arm 5 and with the claw hook 19 attached to the tying or towing chain and oscillating the handle 13, the slack of the tying or towing chain may be easily removed therefrom with a minimum expenditure of effort on the part of the operator. By employing the feed rod 6 and the sleeve 8 it is possible to adjust the tautness of the chain down to a fraction of an inch and after the chain has been properly adjusted, the feed rod and sleeve 8 will maintain the chain in its adjusted position that the operator may fasten the chain with the jack unattended.

When desiring to employ the device for moving a stalled vehicle or for moving a heavy load from one place to another, the hook 19 is engaged with the towing chain and the lever operated in the manner heretofore described, and after the load or vehicle has been moved a distance equal to the movement of the rod 6 and it is desired to move the load or vehicle further, a retaining chain 20 is provided and is attached to the base as shown at 21 and is provided with a claw hook 22 whereby the chain 20 may be hitched to the towing chain maintaining the latter taut while the hook 19 is detached and the feed rod 6 adjusted inwardly of the member 4 that a further hitching may be had upon the towing chain and the operation of the jack repeated.

The base 1 has the forward end thereof slotted as shown at 23 to permit free movement of the chains 20 and 18 and the outer end of the rod 6 is provided with a pin 24 to prevent the sleeve 8 from threading entirely off the rod. One of the arms 3 carries a notched bracket 25 adapted to form a rest for the lever 13 when in an inactive position.

While I have shown and described the preferred embodiment of my invention, it will be understood that minor changes in construction, combination, and arrangement of parts may be made without departing from the spirit and scope of the invention as claimed.

Having thus described my invention, what I claim is:

1. A pulling jack comprising a base, an inclined tubular member mounted on the base, a rod slidable in the tubular member, feed threads on said rod, a feed sleeve engaging said threads and one end of the tubular member, a hand wheel carried by said sleeve for providing quick adjustment of the rod relative to the tubular member, a gear formed integral with the sleeve, a second gear journalled on the tubular member and meshing with the first gear, a pivotally mounted lever associated with the second gear, a pivoted dog on the lever to engage the second gear, and an object engaging means connected to the rod.

2. A pulling jack comprising an elongated base, flanges on said base, said flanges having portions thereof extended and curved to form attaching arms at one end of said base, a combined handle and arm formed on the other end of said base independent of said first arms, a tubular member formed on said arms, a feed rod slidable in the tubular member, means for actuating said feed rod, said tubular member having a slot, a sleeve secured to the rod, an ear formed on the sleeve and extending through the slot, and an attaching element connected to the ear and operable between the first named arms.

In testimony whereof I affix my signature.

STONEWALL J. MONTGOMERY.