Oct. 14, 1930. L. V. McMANUS 1,778,682

POST PULLER

Filed May 14, 1928

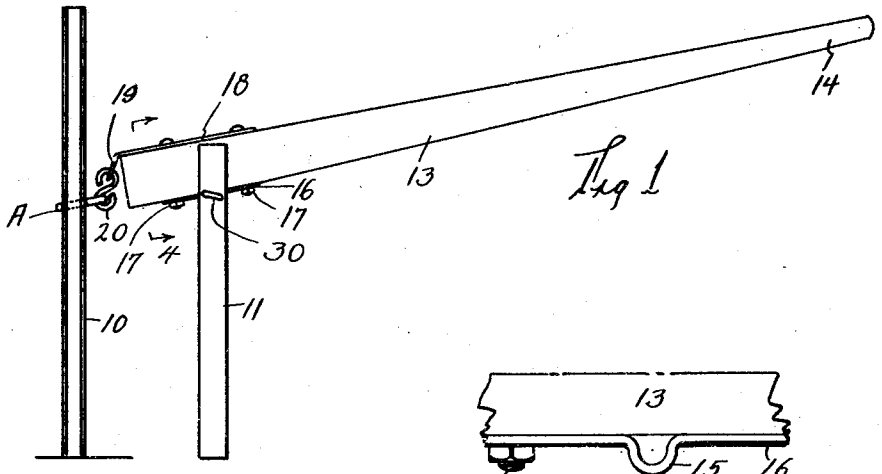



Fig 1




Fig 2

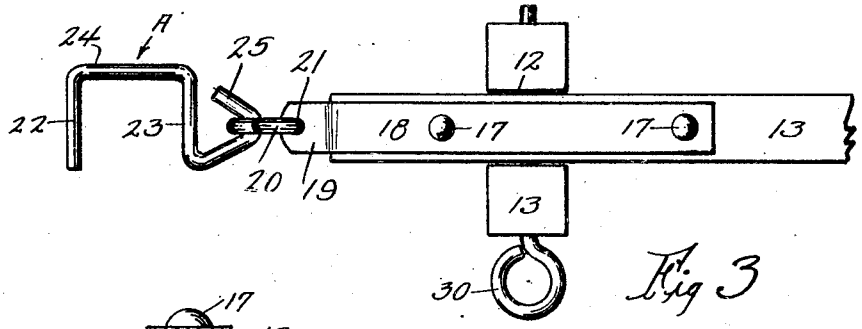



Fig 3

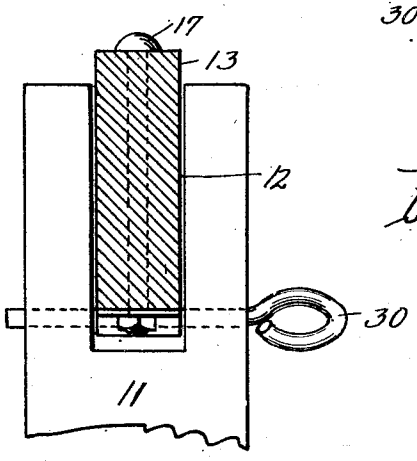



Fig. 4

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# UNITED STATES PATENT OFFICE

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## POST PULLER

Application filed May 14, 1928. Serial No. 277,655.

My invention relates to a post puller and has for its object to provide a knock-down machine of simple, durable and inexpensive construction.

More particularly, it is my object to provide a machine of this class including a fulcrum and a lever, the fulcrum being connected to the lever by a removable pin.

Another object of my invention is to provide a machine having sufficient strength for the purpose of pulling posts.

Another object of my invention is to provide such a machine having a very simple and effective clamp and connecting mechanism for engaging the post.

With these and other objects in view, my invention consists in the construction, arrangement and combination of the various parts of my device, whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claim, and illustrated in the accompanying drawings, in which:

Fig. 1 is a side elevation of the device in operative position engaging a post.

Fig. 2 is a detail view of a portion of the lever at its fulcrum.

Fig. 3 is a plan view of the post engaging end of the machine.

Fig. 4 is a detail, sectional view taken on the line 4—4 of Fig. 1.

I have used the reference character 10 to indicate generally a post, the one illustrated in the drawing being of the present steel variety.

The post puller of my invention has its most useful application in removing snow fences which are commonly put up along the highways before the snows of winter arrive and which are stationed ordinarily fifty or one-hundred feet back of the fence line on the private farm lands of an owner adjoining the highway.

This necessitates the removal of the snow fencing in the springtime and my invention provides a very rapid method of pulling the steel posts without bending or injuring them in any way.

The machine of my invention comprises a fulcrum 11, which may be either of wood or metal, provided at its upper end with a longitudinal slot 12. The lever 13 is provided near one end with a handle 14 and near the other end with a fulcrum loop 15, having the extended arms 16 bolted by means of bolts 17 to the under side of the lever.

The lever is hinged upon the fulcrum 11 by means of a pin 30, extended through registering openings in the bifurcated portion of the fulcrum 11 and through the loop 15. Thus it will be seen that the bifurcated portions of the fulcrum serve as lateral supports for the lever and the pressure of the pin against the lever which would be upwardly is carried by the entire thickness of the lever.

Secured by means of the same bolts 17 to the upper side of the lever is a strap 18, which extends over the end of the lever and is bent downwardly to form a finger 19.

A link 20 is hooked at one end through an opening 21 in the finger 19 and at its other end supports a claw, indicated generally by the reference character A.

The claw A is formed of a heavy bar of steel or the like and is provided with the opposed jaw portions 22 and 23, connected by an intermediate portion 24, forming a U shaped claw or clamp. The jaw 23 is extended to form a hook 25, hooked into the link 20.

The link 20 is preferably S shaped, as shown, although other types of links could be successfully used. It may be also stated that a single link need not necessarily be employed but a chain composed of several links or a cable would do as well.

The simplest and most effective link, however, is the single S shaped link shown. It may be more easily attached than any other type.

The hook 25 is so positioned relative to the U shaped portion of the claw that the plane of the latter will be perpendicular to the plane of the link 20, and consequently perpendicular to the vertical plane in which the lever swings. Thus the claw may be brought to a horizontal plane, as shown in Fig. 1 by simply reaching one finger beneath it and lifting upwardly, in which position

it may be inserted around the post 10 so as to partially encircle the post.

The operator then lifts up enough on the lever to cause the two jaws 22 and 23 to contact with the sides of the posts and the fulcrum 11 is then placed against the ground substantially parallel to the post.

Downward pressure upon the handle 14 causes the short end of the lever to move upwardly, pulling upon the claw through the medium of the link 20 and wedging the jaws 22 and 23 against the post. The jaws will grip the post and further movement of the latter will cause the post to be pulled upwardly.

If the upward limit of movement of the lever has been reached, it is again shifted to position somewhat as shown in Fig. 1, the claw A dropping to a lower position relative to the post, where it may gain a fresh hold.

During this pumping operation, the link 20 will swing in its vertical plane to compensate for the difference in the distance between the end of the lever and the claw as the lever moves toward and from a horizontal position.

The bolts 17 serve the double purpose of securing the loop 15 in place and of securing the strap 18, the straps 18 and 16 serving also as protective reinforcing bands for the short end of the lever. The claw A might be linked directly to the finger 19 by twisting the finger or twisting the hook 25 at substantially right angles to either of their positions shown in the drawings. The claw would then be allowed to swing about a horizontal axis transverse to the lever, which is necessary.

Some changes may be made in the construction and arrangement of the parts of my invention without departing from the real spirit and purpose of my invention, and it is my intention to cover by my claim any modified forms of structure or use of mechanical equivalents, which may be reasonably included within their scope.

I claim as my invention:

In a post puller, a fulcrum, a hinge pin supported by said fulcrum, a lever, a loop fixed to one side of the lever near its end, and receiving the hinge pin, the lever resting above the pin, forming short and long lever arms, a strap secured to the upper side of the short arm, secured by an element extending through the arms and also serving to secure the loop to the arm, and extending beyond the end of the short arm, a link loosely secured to said strap, and a claw loosely secured to the link, said claw having a U shaped portion adapted to partially encircle a post, and to grip the post when subjected to a pull transverse to its plane.

LEO V. McMANUS.