(No Model.)

T. C. CUNNINGHAM & L. A. FUNK.

STUMP PULLER SPOOL.

No. 449,207. Patented Mar. 31, 1891.

Fig. 1.

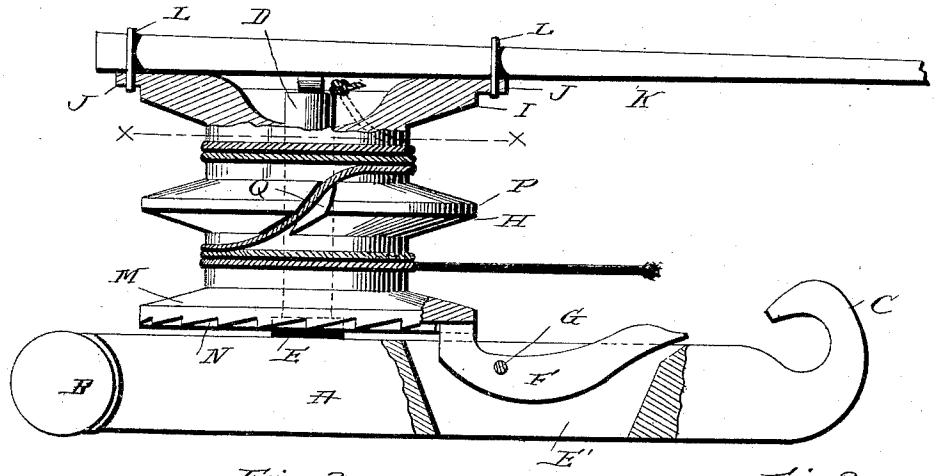


Fig. 2.

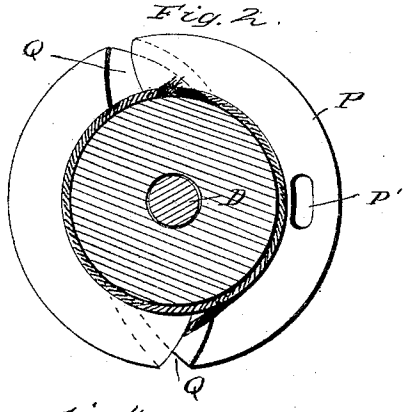


Fig. 3.

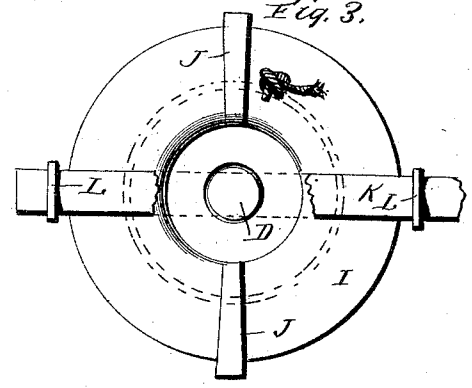


Fig. 4.

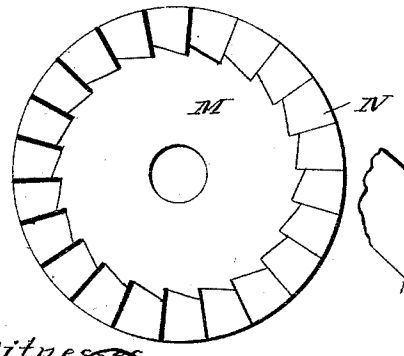
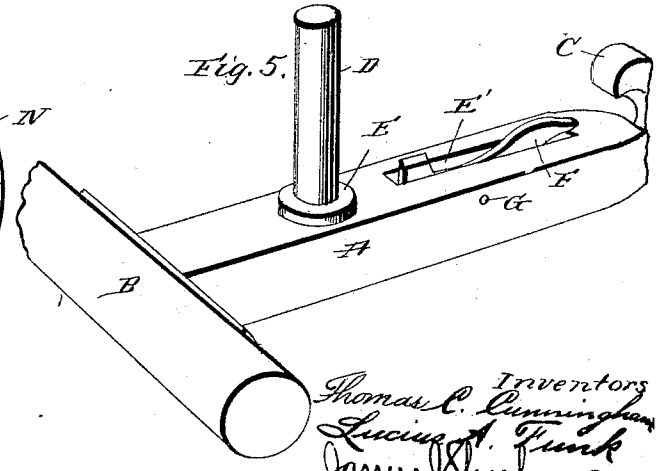


Fig. 5.



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UNITED STATES PATENT OFFICE.

THOMAS C. CUNNINGHAM AND LUCIUS A. FUNK, OF SIGOURNEY, IOWA.

STUMP-PULLER SPOOL.

SPECIFICATION forming part of Letters Patent No. 449,207, dated March 31, 1891.

Application filed November 12, 1890. Serial No. 371,210. (No model.)

To all whom it may concern:

Be it known that we, THOMAS C. CUNNINGHAM and LUCIUS A. FUNK, citizens of the United States, residing at Sigourney, in the county of Keokuk and State of Iowa, have invented certain new and useful Improvements in Stump-Puller Spools; and we do 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.

Our invention relates to improvements in stump-pullers; and it has for its object, among other things, to provide a construction of a machine in which all draft strain will be removed from the superfluous cable during the operation of pulling a stump. This object we accomplish by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of our improved stump-puller, with parts illustrated in vertical section. Fig. 2 is a horizontal sectional view of the drum, taken in the plane indicated by the line *x x* of Fig. 1. Fig. 3 is a top plan view of the drum and spindle, illustrating the sweep connected to said drum. Fig. 4 is an inverted plan view of the drum. Fig. 5 is a perspective view of the base-frame and spindle rising therefrom.

Referring by letter to the said drawings, A indicates the main portion of the bed or base-frame, which is connected at one end to a cross-piece B, together forming a T-shaped bed or base-frame, which in practice is suitably anchored to the ground. The opposite end of the main portion A of the frame terminates in a clevis C, which may be of the ordinary or any approved construction, and is designed for the attachment of a team to draw the machine from place to place.

Rising at a suitable point from the main portion A of the base-frame is a spindle D, which is provided at its base with a washer or flange E, whereby frictional wear is removed from the base-frame.

At a suitable point in the main portion A of the frame we form a longitudinal slot E′, in which is fulcrumed at G a lever F, which engages the ratchet-teeth on the under side of the drum, presently to be described, and serves to prevent backward movement of said drum, but by pressing the engaging end of this lever down, as will be presently described, the drum may be turned backward to slack the cable.

H indicates our improved drum, which is provided with a vertical central bore of the usual form to take over the spindle D, on which it revolves, and this drum H comprises a central body portion, upper and lower flanges, and a middle flange, for a purpose presently to be described. The upper flange I of the drum is provided on its upper side with ribs J, which radiate from points adjacent to the center thereof and extend a slight distance beyond the periphery of the flange for the attachment of the sweep or draft-beam K, which may be of the ordinary construction.

L indicates loops or rings, which are of a size to encircle both the extended ribs and the sweep, and it will be seen that when the sweep is placed in alignment with two of the ribs J by simply adjusting the loops or rings the sweep is attached to the drum, as better illustrated in Fig. 1, and by this construction the sweep may be quickly and readily placed in position and removed, whereby the necessity of backing the team when it is desired to slacken the cable is obviated.

The lower flange M of the drum is provided on its lower side adjacent to its periphery with inclined teeth N, which ride over the lever F in one direction, but abut against the same when the drum is turned in the opposite direction, thus allowing the drum to freely turn while winding, but preventing a backward movement of the same, whereby the draft-team may be rested without a slacking of the cable.

The middle flange P of the drum occupies a position approximately midway between the upper and lower flanges and serves to partition the drum into an upper and a lower apartment or section, and this partition-flange P is preferably tapered, as illustrated, from the body of the drum to its periphery.

Q indicates oblique slots, which are cut in the middle flange at suitable points, and are pitched obliquely, as illustrated, in order to readily lead the cable from the upper section of the drum into the lower when desired.

By having the cable-leading slots obliquely directed it will be observed that, while the

cable will bind in said slot during operation, no sharp angular edge will be presented to cut the cable or wear the same. By this construction the cable which has its end secured in a suitable manner to the drum is wound upon the drum in the upper section thereof until all slack or superfluous cable is taken up and the cable becomes taut, when it is placed in one of the oblique slots Q, and thereby lead into the lower section, and it will thus be seen that when the drum is turned the cable will bind in the oblique slot and remove all draft strain from the superfluous cable in the upper section, thus obviating unnecessary wear of the same.

In some cases a series of radial studs so placed as to provide means for conducting the cable from the upper portion into the lower portion of the drum might be employed in lieu of the intermediate or middle flange having the slotted openings, but the use of said flange is far preferable to any other construction.

Having described our invention, what we claim is—

The improved stump-puller described, consisting, essentially, of the base-frame having a longitudinal slot in one of the branches thereof, the lever fulcrumed in said slot, the spindle rising from said frame, the drum mounted on the spindle and composed of the upper flange I, the intermediate beveled flange P, provided with the obliquely-arranged beveled slots Q, and the base-flange M, having the beveled teeth on its lower side adapted to engage the lever fulcrumed in the main frame, and the sweep K, secured to the upper flange of the drum, all substantially as shown and described.

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

THOMAS C. CUNNINGHAM.
LUCIUS A. FUNK.

Witnesses:
WM. A. BELL,
W. D. HOWARD.