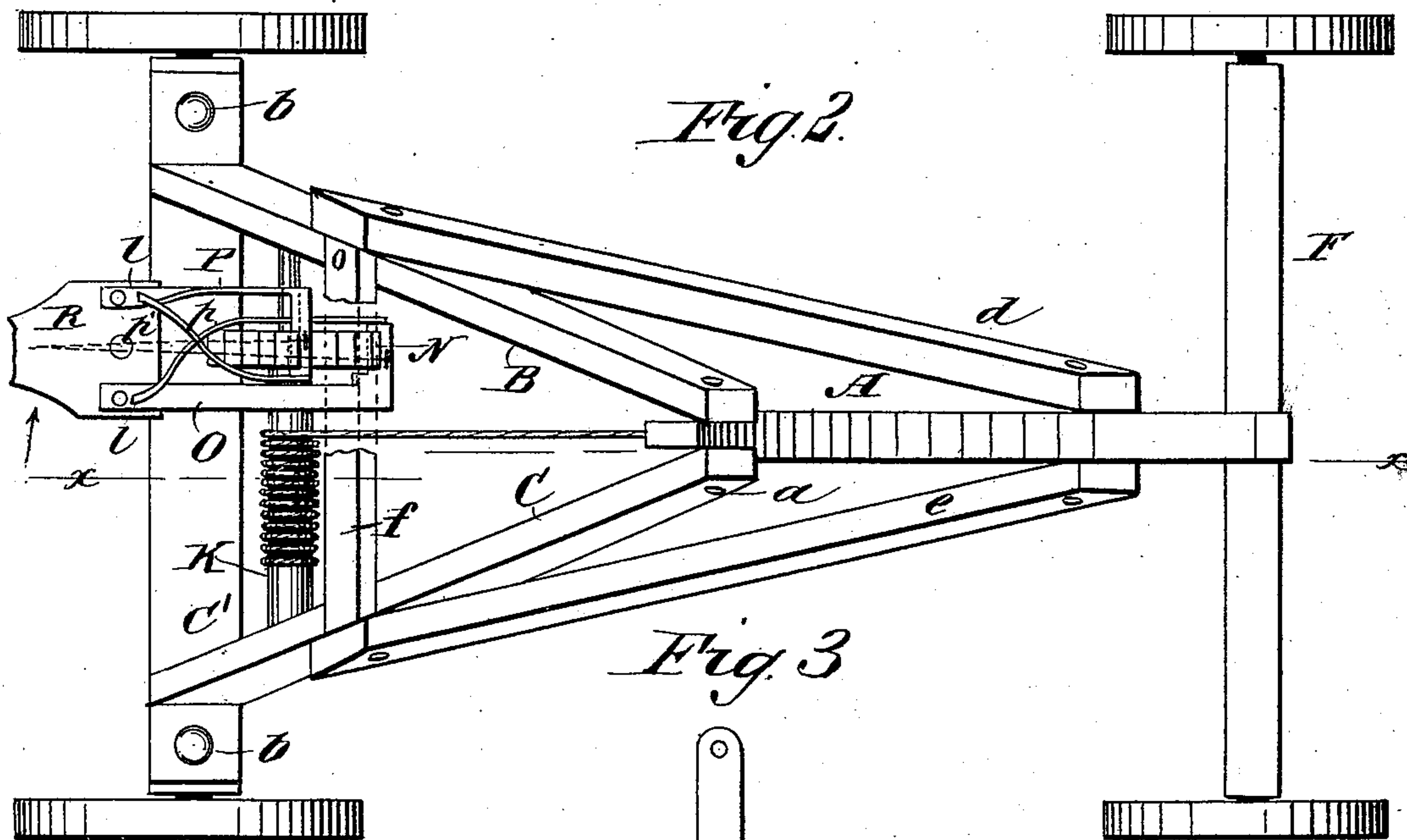
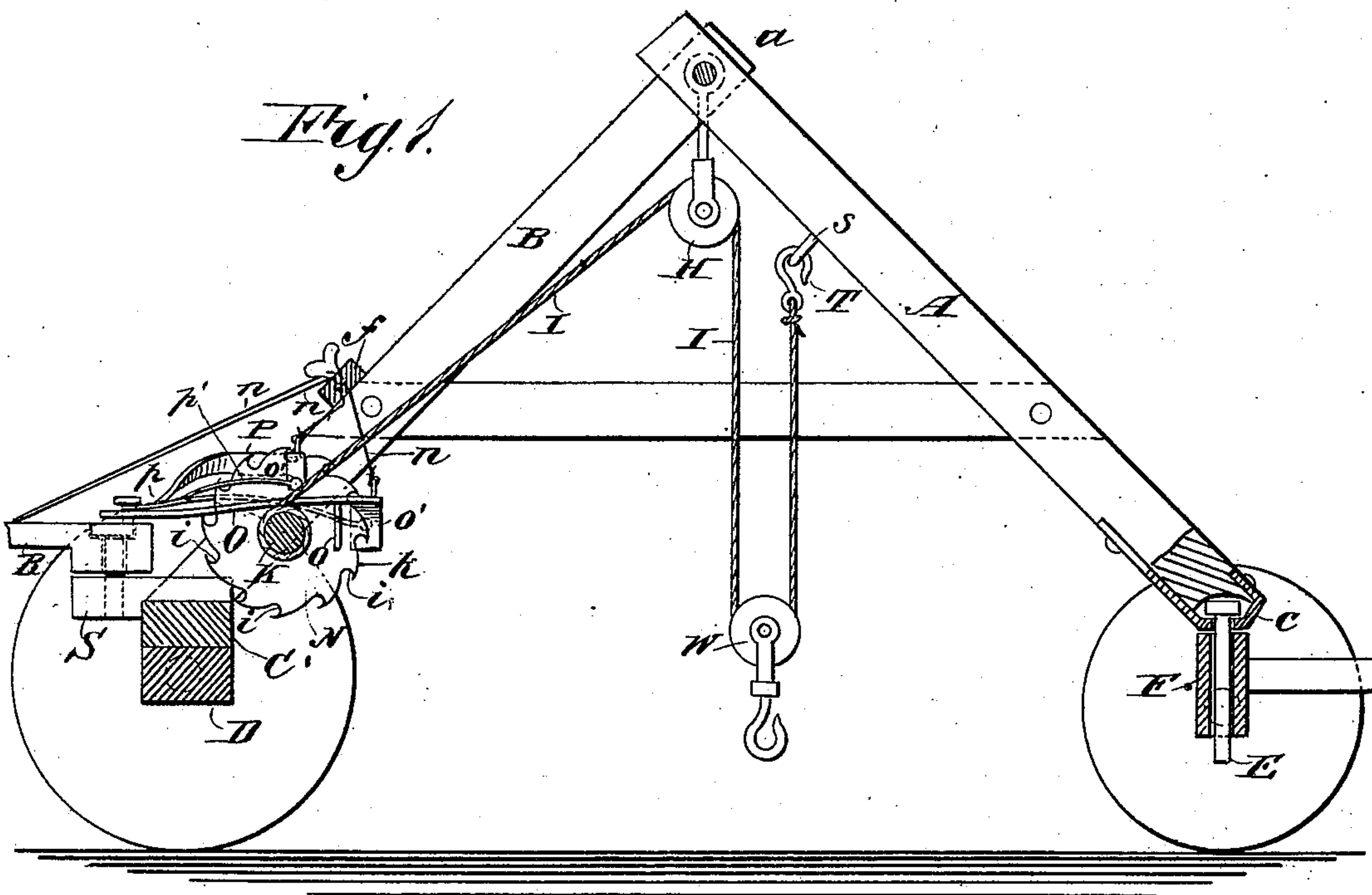


(No Model.)

T. B. BARBER.
STUMP OR STONE PULLER.

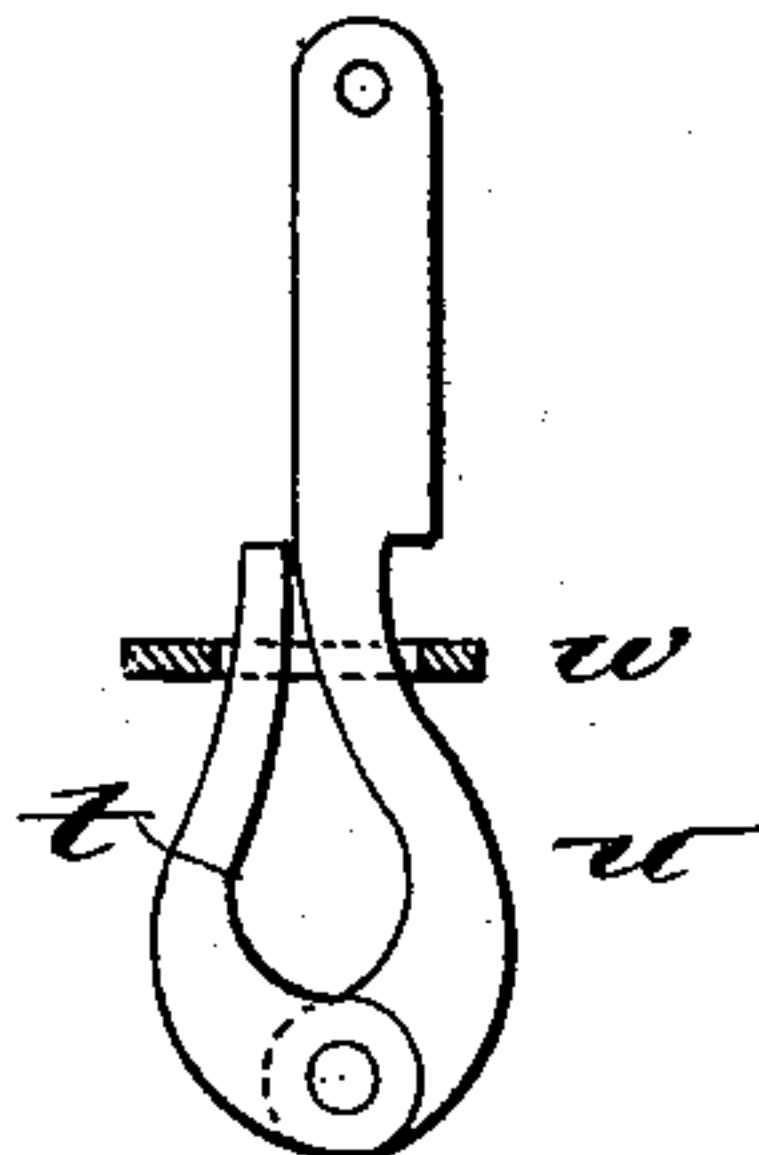
No. 337,114.

Patented Mar. 2, 1886.



WITNESSES :

Wm Arble,
C. Sedgwick



INVENTOR:

J. B. Barber
BY *Munn Ho*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

THURSTON BROWNING BARBER, OF NORWICH, CONNECTICUT.

STUMP OR STONE PULLER.

SPECIFICATION forming part of Letters Patent No. 337,114, dated March 2, 1886.

Application filed July 10, 1885. Serial No. 171,263: (No model.)

To all whom it may concern:

Be it known that I, THURSTON BROWNING BARBER, of Norwich, in the county of New London and State of Connecticut, have invented a new and Improved Stump or Stone Puller, of which the following is a full, clear, and exact description.

My invention relates to that class of devices employed to extract stumps or to remove heavy stones from depressions in the earth; and my object is to construct an apparatus that will be portable, convenient, and effective in operation.

The invention consists of certain details of construction and combinations of parts, as will be hereinafter specifically described, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a sectional side view of my improved stump-puller, taken on line *xx*, Fig. 2. Fig. 2 is a plan view of the apparatus, and Fig. 3 is a view of an improved form of hook.

The main supporting-frame of my stump-puller consists of three heavy timbers, A, B, and C, that are united at one end by a bolt, as *a*, which passes through all three of the timbers. The lower ends of the timbers B and C are tenoned to fit in mortises formed in a sill, C', which is connected by bolts *b b* to an ordinary axle, as D. The lower end of the timber A is provided with a metallic shield or plate, *e*, which supports a king-bolt, E, arranged to engage with the forward axle, F. The brace-pieces *d*, *e*, and *f* are secured to the timbers A, B, and C, and hold the frame formed thereby in a steady pyramidal position, as shown in the drawings. A pulley, H, is suspended from the bolt *a*, and the rope or chain I, which passes over this pulley, is connected to and operated by a windlass, K, that is mounted in bearings formed near the lower ends of the timbers B and C. A toothed wheel, N, of peculiar construction, is rigidly secured to the shaft of the windlass K, which is rotated by means of motion imparted to the wheel N by catch-arms O and P, as will be specifically explained. The teeth *k k* of the wheel N have recessed bearing-surfaces *i i*, so

formed as to prevent the slipping or twisting of the catch-arms by which the wheel is operated. The catch-arms O and P are pivotally connected to the head of an oscillating lever, R, that is pivoted to the sill C' or to a projection, as S, that is secured to the sill. In the drawings, this lever is shown as being broken off, but it will, of course, be understood that it could be extended to any length desired to obtain a proper leverage. The catch-arm O projects from its pivotal connection with the lever R directly over the windlass K, to engage with the teeth on the inner side of the wheel N, while the arm P rises from its pivotal connection with the lever to engage with the teeth near the top of said wheel. Both catch-arms are provided with downwardly-projecting wings or ears *o o'*, one on either side of the wheel N, which prevent the lateral displacement of the catch-arms. Brace-rods *p* and *p'*—one rigidly secured to the catch-arms O and P at the points *l l'*, as best shown in Fig. 2—the rod *p* extending across the face of the wheel N, to be united to the free end of the catch-arm O, and the rod *p'* extending upward and over the rod *p* across the face of the wheel to the free end of the catch-arm P, to which it is affixed.

Such being the construction of the parts, it will be readily seen that by moving the lever R back and forth a reciprocating motion will be imparted to the catch-arms O and P—that is to say, when the lever is moved in the direction of the arrow the catch-arm O will be brought into engagement with one of the teeth of the wheel N, and at this time the catch-arm P will be moving forward to engage with an advance tooth in the wheel N, when the direction of the movement of the lever R is reversed, which change in the movement of the lever would advance the catch-arm O, and so on throughout the operation of winding up the rope I, in order to raise the stone or stump to which it is attached.

In order to increase the effect of the power applied to the lever R, I sometimes employ a removable pulley, as W, with the effect well understood in mechanics, the hook T on the end of the rope or chain I being in this case attached to an eyebolt, *s*, that is carried by the timber A.

When it is desired to lower the end of the rope I by unwinding that portion of the rope which has been coiled on the windlass, the catch-arms O and P are raised from engagement with the teeth of the wheel N by means of cords *n n*, which are secured to the projecting ends of the catch-arms and pass through apertures formed in the cross-brace *f*, and from there extend downward toward the lever R within reach of the operator.

In Fig. 3 I illustrate an improved form of hook for use upon the apparatus above described, wherein the point *t* is pivotally connected to the shank *w*, being held in the position shown by a clamping-collar, *w*.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. In a stump-puller, the combination, with

the frame A B C, the windlass K, journaled in said frame, and the toothed wheel N, attached on said windlass, of the lever R, pivoted by one end on the frame A B C, adjacent to the wheel N, to vibrate in a plane parallel with the axis of said wheel and windlass, the arms O and P, pivoted to the head of the lever R at opposite sides of the pivot-point of said lever and engaging the teeth of the wheel N, substantially as described.

2. The herein-described frame, consisting of the timbers A, B, and C, united, as described, by the sill C', bolt *a*, and brace-pieces *d*, *e*, and *f*, the timber A being provided with a king-bolt, E, substantially as described.

THURSTON BROWNING BARBER.

Witnesses:

AMOS A. BROWNING,
S. ASHBEL CRANDALL.