

(No Model.)

G. R. IVES.
STUMP PULLER.

No. 361,631.

Patented Apr. 19, 1887.

Fig 1

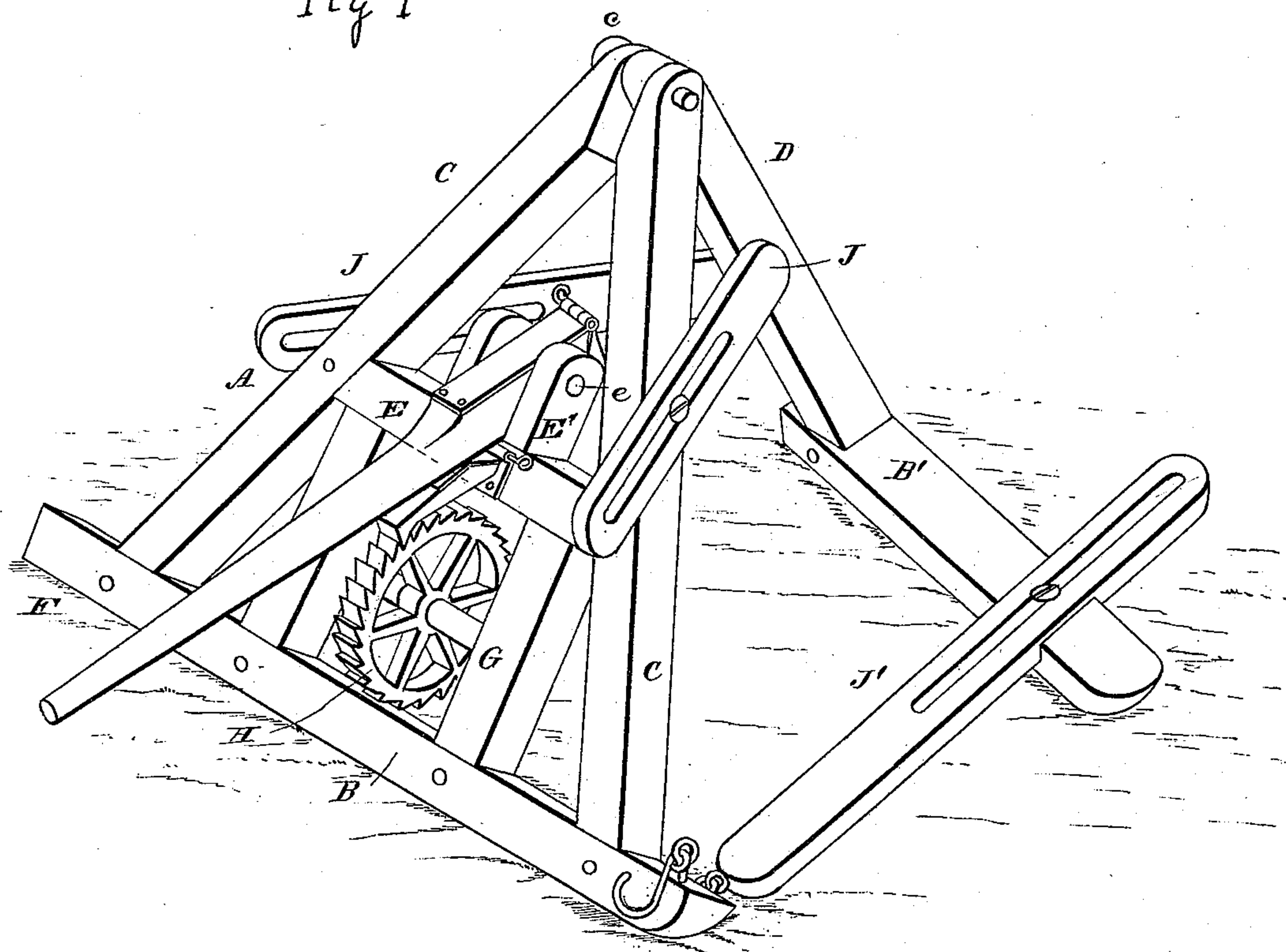
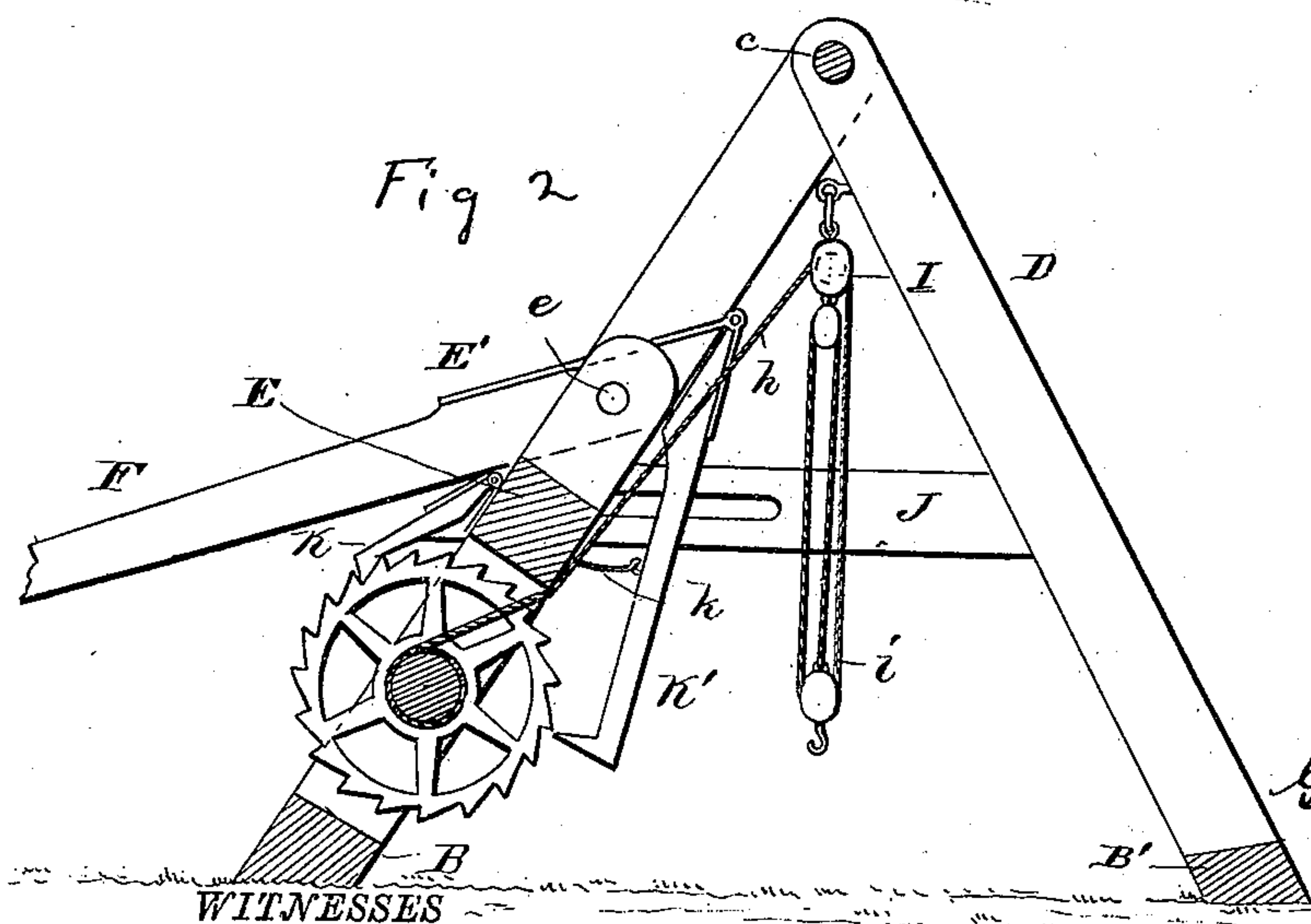


Fig 2



WITNESSES
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GEORGE RILEY IVES, OF WEST PIKE, PENNSYLVANIA.

STUMP-PULLER.

SPECIFICATION forming part of Letters Patent No. 361,631, dated April 19, 1887.

Application filed February 11, 1886. Serial No. 191,587. (No model.)

To all whom it may concern:

Be it known that I, GEORGE RILEY IVES, a citizen of the United States of America, residing at West Pike, in the county of Potter and State of Pennsylvania, have invented certain new and useful Improvements in Stump-Pullers; and I do hereby 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, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to certain new and useful improvements in stump-pullers; and it consists in the construction and combination of the parts, as will be hereinafter fully set forth, and specifically pointed out in the claim.

In the accompanying drawings, which illustrate my invention, Figure 1 is a perspective view of a stump-puller constructed in accordance with my improvement, and Fig. 2 is a vertical sectional view.

A represents a suitable frame, which consists, essentially, of a base-piece or runner, B, which has rigidly secured thereto two beams, C, which converge toward each other at their upper ends, the said upper ends being beveled, so as to provide a parallel space between them, within which is pivoted, by means of bolts *c*, a single inclined beam, D. About midway between the beams C C is rigidly secured a cross-beam, E, the upper edge of which is provided with short upwardly-extending pieces E', which are parallel to each other and are provided with perforations, through which passes a bolt, *e*, which forms a bearing for a lever, F.

G G refer to two parallel beams, which are rigidly secured to the runner B and the cross-piece E, said beams having on their inner sides bearings for the shaft of a ratchet-wheel, H. The shaft of the ratchet-wheel H is provided on one side of said wheel with a drum, around which passes the operating-rope *h*, said rope extending upwardly where it is passed through a block, I, which is secured to the inclined beam D in any suitable manner. The block I is provided with a pair of rollers, and the rope *h*, after passing over the upper roller,

extends downwardly and passes through a block, *i*, which is provided at its lower end with a hook, and the rope is again passed upwardly and over the lower roller of the upper block, and is then secured to an eye at the upper portion of the block *i*, thus securing a large amount of leverage. To the hooks on the lower block, *i*, the chains or grapple is attached, which can be secured to a stump or other object which it is desired to elevate.

J refers to slotted brace beams or bars, which are pivotally attached by means of eyebolts to the inclined beam D, their opposite ends being slotted, so that they can be adjustably secured to the uprights C C by means of set-screws or bolts. The end of the runner B has pivotally secured thereto a brace-bar, J', which extends over the runner B', and is secured thereto by a bolt which passes through a slot in the same. The runner B' is recessed, so that the brace-beam J' may lie within said recess. By pivoting the upright beams C and D to each other and providing them with adjustable brace-beams, the parts may be spread, as desired, and when not in use the parts may be folded, so as to occupy but very little space.

The uprights E', between which the lever F is pivoted, are located to one side of the center of the space between the beams, so as to provide a space between one of the uprights E' and one of the beams C, so that the bolt which secures the lever to the upright E' can be slid to one side, so that the lever can be removed therefrom, and the pivot-bolt which secured the pawl to said lever is also removable, so that said pawl can be detached from the aforesaid lever.

Immediately above the ratchet-wheel H to the horizontal beam E is pivotally attached a pawl, K, which will engage with the teeth of the ratchet-wheel and prevent the same rotating in one direction, and to the inner end of the lever is pivotally attached a pawl, K', the end of which is bent inwardly, so that the same can contact with the ratchet-teeth of the wheel H, so as to cause the rotation of said wheel and drum when the lever is depressed. This pawl is held in contact with the teeth of the ratchet-wheel by a spiral spring, *k*, or other spring-connection, which is secured to the pawl and to the cross-beam E.

Instead of employing a spiral spring to hold

the pawl K' in contact, I may use a cord and attach a weight near the center thereof, the effect of which may be the same.

5 The runner B' inclines at its forward end toward the runner B, and the front end of said runner is provided with a hook or other suitable means for attaching a whiffletree thereto, to which horses may be attached for drawing the stump-puller to where it is de-
10 sired to use the same.

The operation of my invention is obvious, and by the construction hereinbefore described I provide an apparatus which, when not in use may be readily folded, so as to oc-
15 cupy but a very small space.

I claim—

20 In a stump-puller, the frame consisting of runner B, converging bars C, parallel bars G, fitted with bearings, cross-bar E, having upwardly-extending lugs, a bar, D, pivoted at

its upper end between the adjacent ends of bars C, and provided at its lower end with a runner, B', slotted braces J, pivoted at their rear ends to bar D and adjustably secured at their forward ends to bars C C, and slotted
25 brace J', coupled at its forward end to runner B and adjustably secured at its rear end to runner B', in combination with a ratchet-wheel having its shaft journaled in the bearings of bars G, a gravitating pawl to engage
30 the ratchet, a lever pivoted between the lugs of bar E and provided at its rear end with a pawl, and a drum carried on the shaft of the ratchet-wheel, substantially as described.

In testimony whereof I affix my signature in
35 presence of two witnesses.

GEORGE RILEY IVES.

Witnesses:

F. A. BROWN,

D. E. CRANDALL.