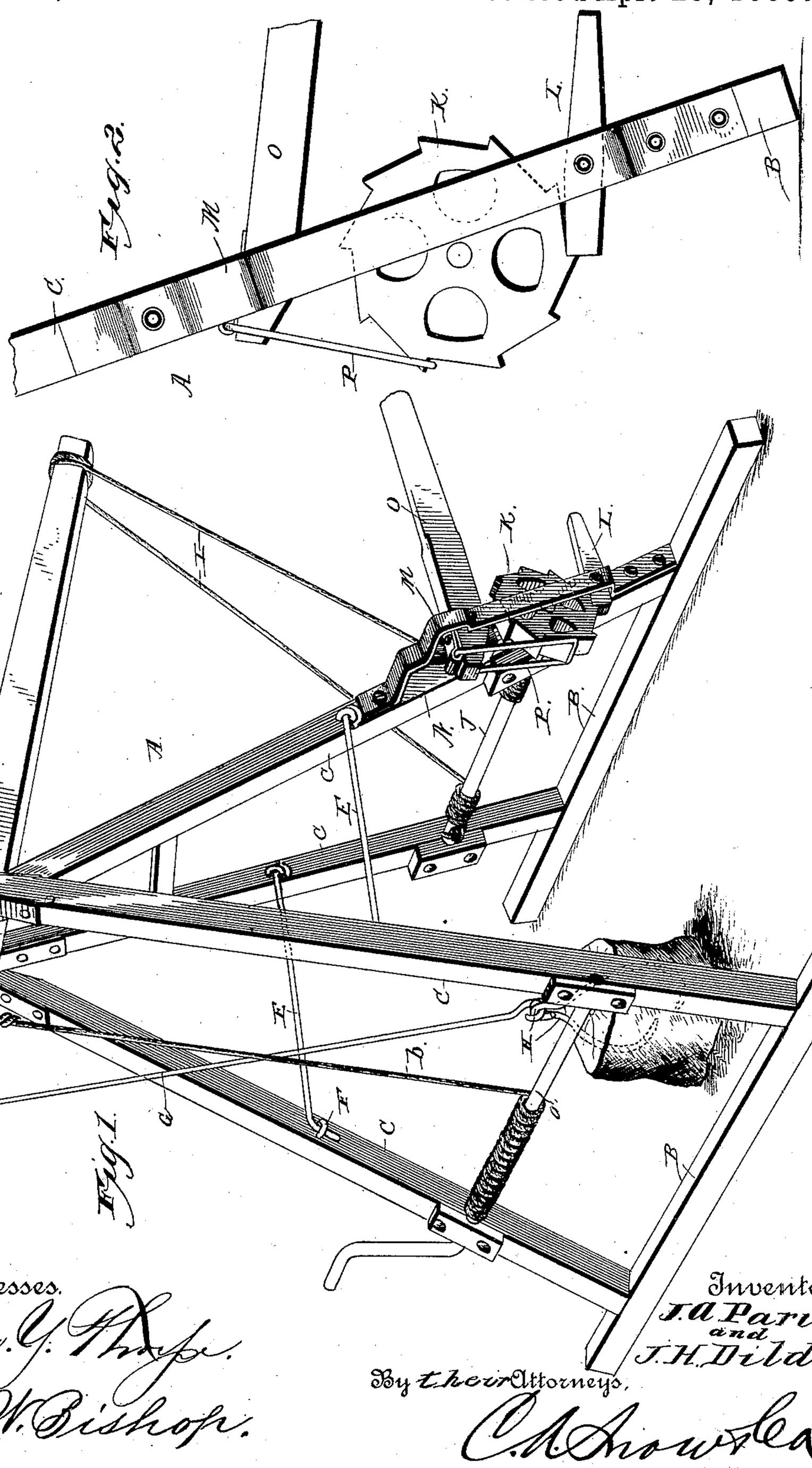
(No Model.)

J. A. PARIS & J. H. DILDAY.

STUMP EXTRACTOR.

No. 401,850. Patented Apr. 23, 1889.



Witnesses.
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UNITED STATES PATENT OFFICE.

JAMES A. PARIS AND JAMES H. DILDAY, OF GIBSON, TENNESSEE.

STUMP-EXTRACTOR.

SPECIFICATION forming part of Letters Patent No. 401,850, dated April 23, 1889.

Application filed December 18, 1888. Serial No. 294,001. (No model.)

To all whom it may concern:

Be it known that we, JAMES A. PARIS and JAMES H. DILDAY, citizens of the United States, residing at Gibson, in the county of Gibson and State of Tennessee, have invented new and useful Improvements in Stump-Extractors, of which the following is a specification.

Our invention relates to improvements in stump-extractors; and it consists in certain novel features, hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a perspective view. Fig. 2 is a detail front elevation of the ratchet-wheel and operating-lever and adjacent parts.

Referring to the drawings by letter, A designates the frame, comprising the foot-pieces or sills B B and the converging inclined standards C, rising from the said sills or foot-pieces. The standards are pivoted together at their upper ends by a pivot-bolt, D, and are held at the proper distance apart by the braces E E, which are pivoted to one pair of standards and engage eyes or loops F F on the other pair of standards. When the device is not in use, these braces are disengaged and the standards are then folded together, so that the machine can be stored away in a small space. The lifting-lever F′ is fulcrumed upon the pivot-bolt D and has depending from its shorter arm a chain or rod, G, to the lower end of which we secure the grappling-hooks H, which are adapted to be forced into the stump to be extracted. To the end of the longer arm of the lifting-lever we secure the rope I, which extends downward in diverging branches to a windlass, J, which is journaled in suitable bearings on the standards, as clearly shown, and has one end extended beyond the standard and provided with a ratchet-wheel, K, which is engaged by a gravity-pawl, L, pivoted to the side of the standard below the ratchet-wheel to prevent retrograde motion. A keeper or guard-plate, M, is secured to the standard and extends over the ratchet-wheel to prevent its slipping from the end of the windlass, and between the side of this keeper or guard-plate and a block, N, secured to the side of the standard, we pivot the operating-lever O, to the shorter end of which we secure a loop, P, which is adapted to engage the teeth of the ratchet-wheel in the operation of the device.

In practice the machine is arranged over the stump to be drawn from the ground, the grappling-hooks engaged in the said stump, and the operating-lever then vibrated in a vertical plane to rotate the ratchet-wheel, and thereby operate the windlass to wind the rope thereon, as will be readily understood. As the rope is wound on the windlass, the longer arm of the lifting-lever will be drawn downward and the shorter arm raised, thereby lifting the stump and drawing it from the ground.

Our device is very simple and efficient. It is composed of few parts and can be stored away in a small space when not in use, and is light, so that it can be easily transported.

If so desired, the machine may be provided with a small windlass, *a*, arranged on the side opposite the windlass J and connected with the shorter arm of the lifting-lever by a rope, *b*. This windlass is employed to draw the lifting-lever downward, so that the grappling-hooks may be made to engage the stump and hold it down while they are being so engaged.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

1. In a stump-extractor, the combination of the standards pivoted together at their upper ends, the braces pivoted to one pair of standards and detachably engaging the other pairs, the lifting-lever fulcrumed on the pivot-bolt of the standards, the grappling-hooks suspended from the lifting-lever, and mechanism for operating the said lever, as set forth.

2. The combination of the standards, the lifting-lever fulcrumed at the upper ends of the standards, the grappling-hooks suspended from said lever, the windlass journaled upon the standards, the rope secured to the lifting-lever and adapted to wind on the windlass, the ratchet-wheel on the end of the windlass, the gravity-pawl pivoted below the ratchet-wheel and engaging the same, and the operating-lever pivoted above the ratchet-wheel and provided with a loop engaging said wheel, as specified.

3. The standards pivoted together at their upper ends, the lifting-lever fulcrumed on the

pivot-bolt of the standards, and the grappling-hooks suspended from the lifting-lever, as set forth.

4. The standards pivoted together at their upper ends, the lifting-lever fulcrumed on the pivot-bolt of the standards, and the grappling-hooks suspended from the lifting-lever, the windlass *a*, connected with the short arm of the lifting-lever by rope *b*, and the windlass J, connected to the long arm of said lever by rope I, as set forth.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in presence of two witnesses.

JAS. A. PARIS.
JAMES H. DILDAY.

Witnesses:
H. N. THORP,
H. M. FLY.