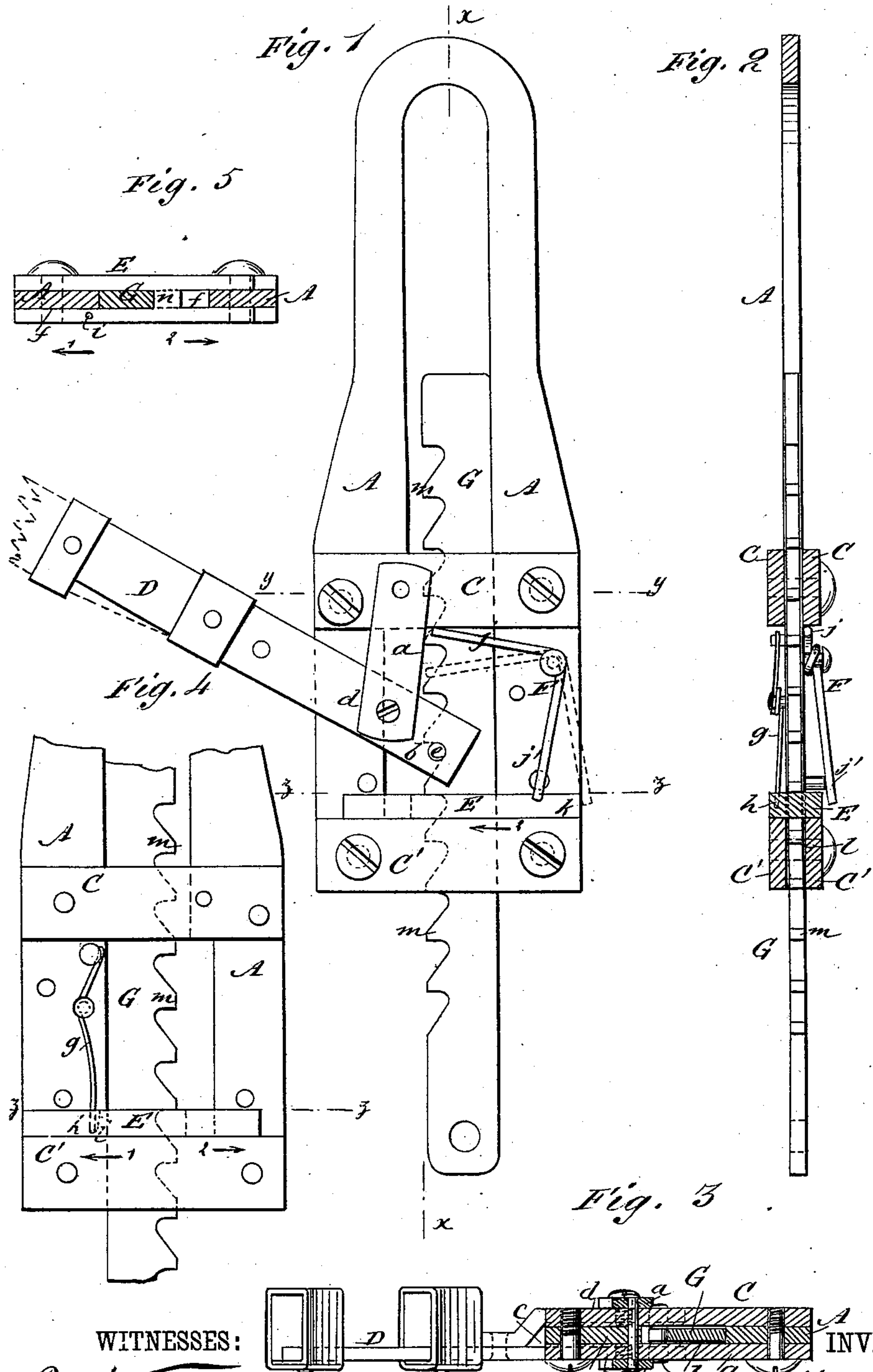


W. H. WRIGHT.
Stump-Extractor.

No. 227,087.

Patented April 27, 1880.



WITNESSES:

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INVENTOR:

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UNITED STATES PATENT OFFICE.

WILLIAM H. WRIGHT, OF BELMONT, NEW HAMPSHIRE.

STUMP-EXTRACTOR.

SPECIFICATION forming part of Letters Patent No. 227,087, dated April 27, 1880.

Application filed November 23, 1879.

To all whom it may concern:

Be it known that I, WILLIAM H. WRIGHT, of Belmont, in the county of Belknap and State of New Hampshire, have invented a new and Improved Stump-Extractor, of which the following is a specification.

The object of my invention is to furnish an efficient and powerful implement for raising stumps, roots, rocks, and other objects.

The invention consists of a vertical U-shaped frame in which moves a ratchet-bar, said frame being provided with a lever for lifting the ratchet-bar, a latch for retaining the bar at the point to which it is lifted by the lever, and springs for throwing the latch in and out of engagement with the ratchet-bar.

In the accompanying drawings, Figure 1 is a side elevation of my improvement. Fig. 2 is a vertical section of my improvement, taken on line *x x* of Fig. 1. Fig. 3 is a cross-section taken on line *y y* of Fig. 1. Fig. 4 is a side elevation of part of the extractor, showing the spring for throwing the catch into engagement with the ratchet-bar; and Fig. 5 is a cross-section of the extractor, taken on line *z z* of Fig. 1.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, A A are the side bars of the frame of my extractor, made of one piece bent to the form of a U, or in any other suitable manner. C C and C' C' are cross-plates bolted to the sides of side bars, A A. From cross-bars C C depend links *a a*.

D is a lever having its weight end *b* provided with a slot, *c*. The lever is applied by passing one of the side bars, A, in the slot *c* and pivoting two jaws, *d d*, to the links *a a*. Beyond the fulcrum of the lever, in the links *a a*, the jaws *d d* are joined by a bolt, *e*.

E is the latch, provided with slots *f f*. The latch is placed on top of cross-bars C' C', with the side bars, A, in the slots *f f*. A spring, *g*, has its lower end, *h*, placed in a hole, *i*, of latch E. This spring *g* draws latch E in the direction of arrow 1. On the opposite side from spring *g* is pivoted a spring-lever, F, one arm, *j*, whereof projects toward lever

D, while the other arm, *j'*, hangs down by the latch E.

When lever F is in the position it occupies in Fig. 1, with its arm *j'* alongside of latch E, it has no effect on said latch; but when moved into the position indicated by the dotted lines, with its lower arm, *j'*, against the end *k* of latch E, and the upper arm, *j*, is struck by lever D, the arm *j'* throws the latch E in the direction of arrow 2.

G is a ratchet-bar, which is passed up in the space *l* between said bars A and cross-bars C C'. When the bar G is moved up, the teeth *m* bear against the cross-bar *n* of the latch and force the latch E back out of the way in the direction of arrow 2; but as soon as a tooth passes the said bar *n* spring *g* draws the latch in the direction of arrow 1 under the tooth and holds the bar up.

The mode of operating the extractor is as follows: The extractor is placed over the object to be extracted, and the ratchet-bar G is allowed to slip down as far as may be necessary to connect it with the said object. The lever D is now operated so as to cause the bolt *e* to engage the teeth *m* of the ratchet and raise the bar G. As said bar is raised each tooth *m* pushes the latch back in the direction of arrow 2, and when said tooth passes bar *n* spring *g* draws the latch in the direction of arrow 1, so that the bar *n* will pass under the tooth and hold the bar G in the position to which it is raised, while the lever is operated to engage a tooth lower down on the bar.

When the bar G is to be lowered to take a new hold, or for any other purpose, the spring-lever F is arranged so that the arm *j'* will bear against the end *k* of the latch. The lever D is then operated so that its end *b* will strike the arm *j* of lever F and move the lever so that its arm *j'* will throw the latch in the direction of arrow 2 and the bar *n* out of engagement with the teeth of the ratchet-bar G. Now, by lowering end *b* slightly the bolt *e* will be moved back away from teeth *m*, and the bar G will be allowed to drop down to the position required.

Having thus fully described my invention,

I claim as new and desire to secure by Letters Patent—

1. As an improvement in stump-extractors, the frame composed of side bars, A, and
5 cross-bars C C', in combination with the lever D, latch E, and ratchet-bar G, as and for the purpose substantially as described.

2. In combination with the ratchet-bar G and latch E, the spring *g*, substantially as de-
10 scribed.

3. In combination with the ratchet-bar G, latch E, and lever D, the spring-lever F, constructed and operated in the manner substantially as described.

WILLIAM H. WRIGHT.

Witnesses:

GEO. F. LEAVITT,
H. E. MACE.