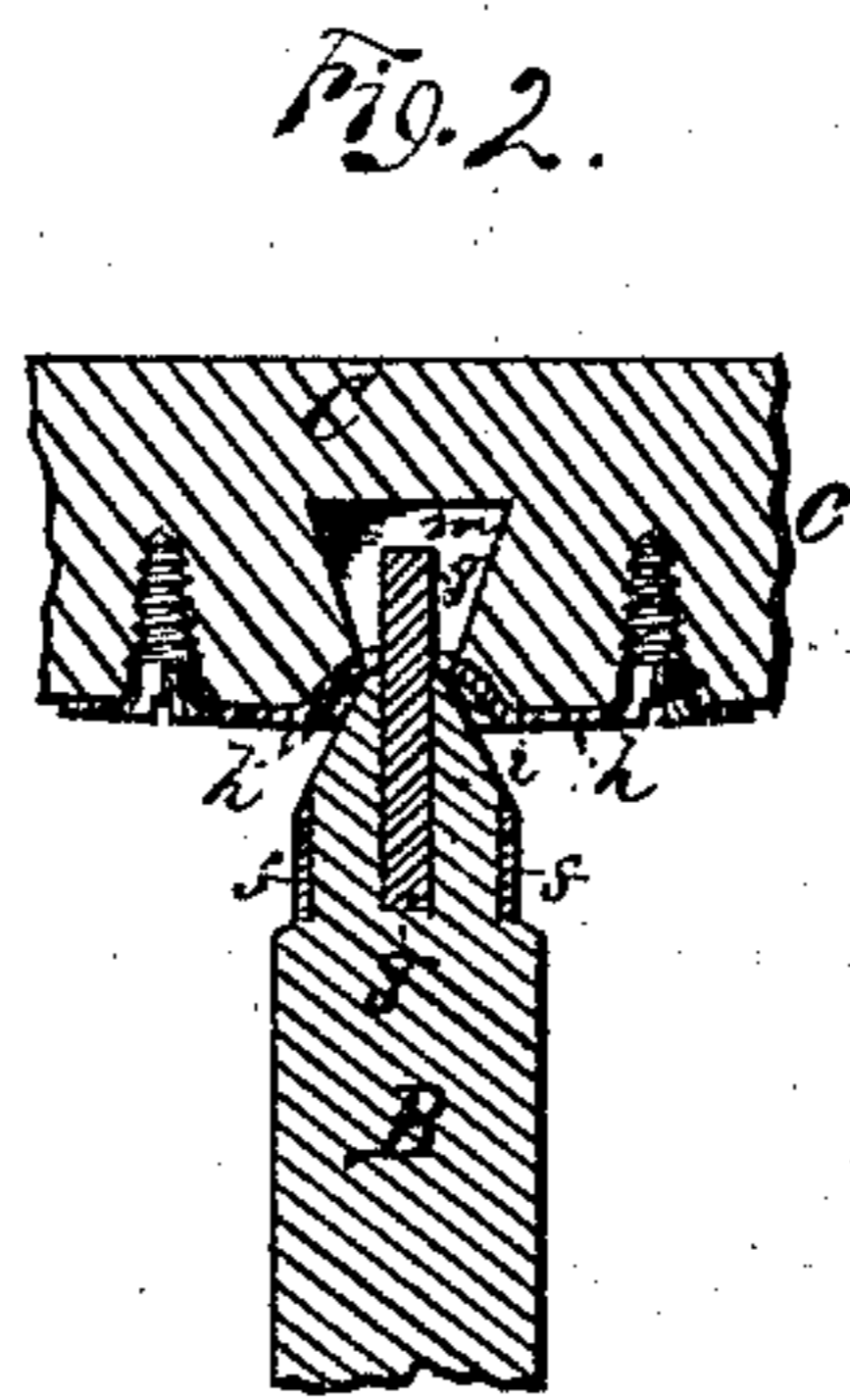
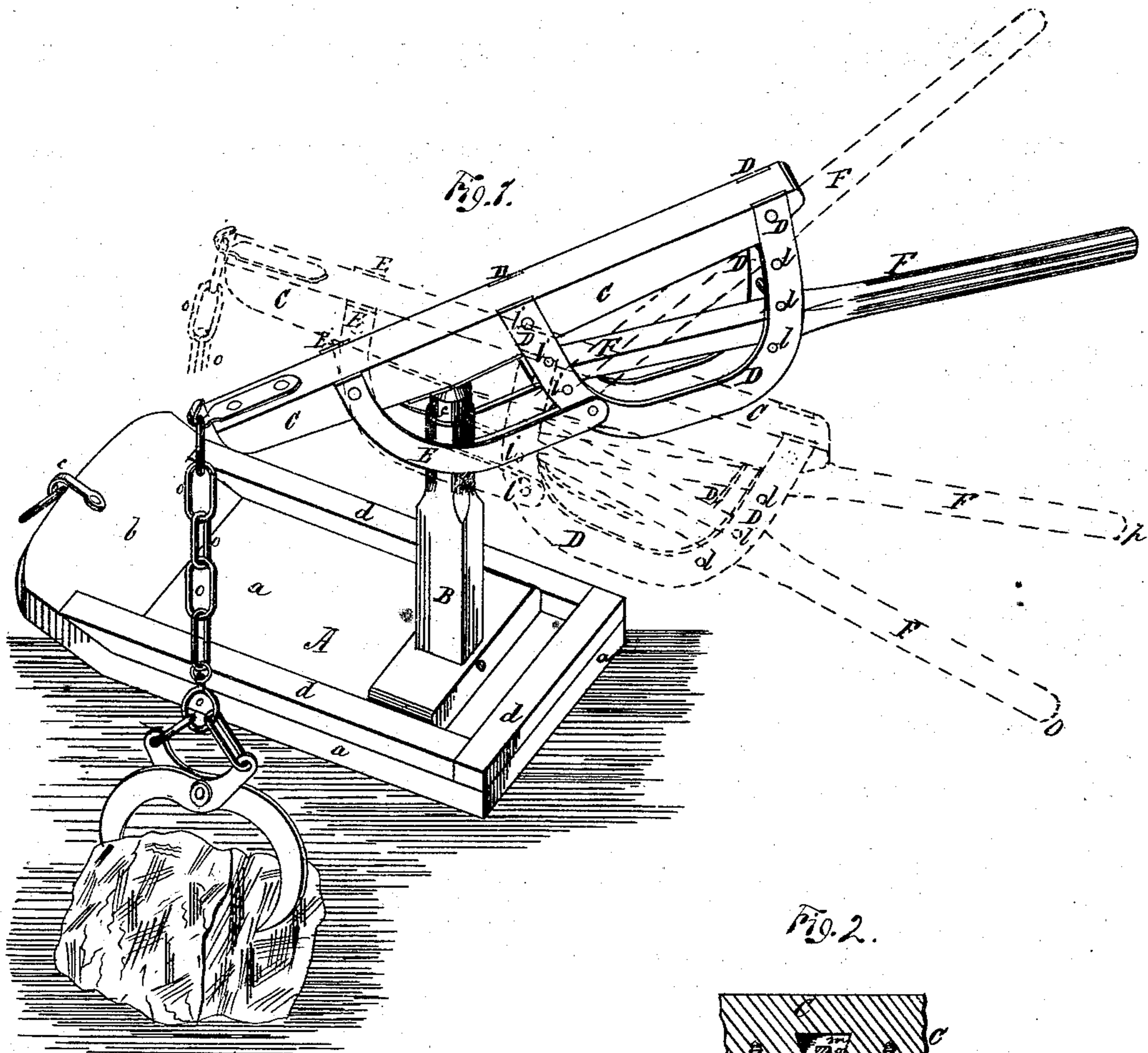


L. J. HOUSE.

Stump-Extractors and Stone-Pullers.

No. 157,829.

Patented Dec. 15, 1874.



Witnesses:  
A. McCallum  
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Inventor:  
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per P. Hannay  
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# UNITED STATES PATENT OFFICE.

LUTHER J. HOUSE, OF SALEM, VERMONT.

## IMPROVEMENT IN STUMP-EXTRACTORS AND STONE-PULLERS.

Specification forming part of Letters Patent No. **157,829**, dated December 15, 1874; application filed November 18, 1874.

*To all whom it may concern:*

Be it known that I, LUTHER J. HOUSE, of Salem, in the county of Orleans and State of Vermont, have invented certain new and useful Improvements in Stump-Extractor and Stone-Puller; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification, in which—

Figure 1 represents a view, in perspective, of a machine embodying my improvements, and Fig. 2 a detached and sectional view of the bearing of the lever and its pivotal standard.

My invention relates to a new and improved mode of constructing stone or stump extractors. Its nature consists in combining a working beam or lever, of peculiar construction, with a stationary pivotal standard erected on the platform of a carriage or sled, whereby, through the instrumentality of a handspike or lever and grappling-irons of suitable form and construction, the operation of lifting stones or other heavy bodies to a sled or carriage, or of extracting stumps, is much facilitated, while the simplicity of construction of the apparatus enables it to be built at such small cost as to bring it within the reach of farmers of small means.

To enable others skilled in the art to make, construct, and use my improvement, I will now proceed to describe its parts in detail.

The sled A may be made of any suitable shape and construction, so long as it is made sufficiently stout and strong to support the pivotal standard B, on which the working parts of the machine are mounted and supported. In this case it is represented as consisting of a slide-platform, *a*, having an upwardly-inclined front end, *b*, in the manner of a sled for removing earth, and to which the horses or oxen are hitched by means of a clevis, *c*, when moving it from place to place. The sled is strengthened by stout beams *d*, secured to its upper side, on each side, and rear end. At or near the rear end of the platform a stout supporting cross-beam, *e*, is firmly bolted. In

this cross-beam is formed a mortise at or near its middle, into which fits a tongue, formed on the lower end of the vertical pivotal standard B, and which is then firmly secured in place by passing a bolt or pin horizontally through the cross-beam and tongue. The standard B may be supported at its rear and sides by braces suitably secured to it and the sled, if desired. The upper end of the standard B is made of a conical shape, and when made of wood is provided with a binding metal ring, *f*, to prevent splitting when the strain of the working apparatus is brought to bear upon it. Into the upper end of the conical portion of standard B is inserted, in any suitable manner, the pivotal pin *g* proper, on which the working lever C turns. For this purpose lever C is provided with a short slot, *m*, near its front end, which runs longitudinally—that is to say, in the line of its length. This slot is protected by a shield-plate, *h*, against the wear and tear of the pivotal pin and upper end of the pivotal standard. The under side of the shield-plate is formed with a conical depression corresponding in size and shape with the conical end *i* of the standard B, which at its inner end is provided with a slightly-elongated opening, of a size sufficient not only to receive the pivotal pin *g*, and to allow the lever C to turn freely thereon in a horizontal direction, but to allow vertical play to the lever on the pin *g* through the longitudinal slot cut in the under side of the lever. The weight and strain proper on the lever C when being used is borne by the shield-plate *h*, as it rests with its conical socket on the correspondingly-formed end of the standard, and not upon the pin *g*. The lever C thus mounted is provided with all the motions necessary for the thorough performance of its work—that is to say, motion in a horizontal plane and from end to end in a vertical plane. To the rear end of the working beam or lever C are secured two curved metal straps or plates, D, one on each side. These are firmly secured to each other by strong bolts or rods, which form the bearing-pins *l l'* of the handspike F, through which the operator applies the power to lever C, there being for this purpose a corresponding row of said pins *l l'* at suitable intervals apart on the front and rear ends of said metal plates D, so that

in placing the lever F in position for work its inner end would bear against the under side of one of the front pins *l'*, and rest on the upper side of one of the rear pins *l*. By having several of these pins, as well in the front as rear, the handspike F may be adjusted so as to suit the position of lever C when attached to the weight to be raised. Immediately in front are arranged two other curved metal straps, E, one on each side, the upper or front end of which is secured to lever C and the lower or rear end to the front end of the straps D. These straps E act as guide-stays, to prevent lateral movement in lever C, as they are made to embrace the sides of the pivotal standard B, and which has its bearing in lever C at a point midway, or thereabout, between the front ends of straps D and E. To the front end of lever C is secured, in any suitable manner, a strong metal hook, K, to which is suspended a chain, *o*, and grappling-irons *n*, of any suitable shape and construction, for the purpose required.

The apparatus thus constructed, the operation is as follows: The lever C is turned around until its forward end is immediately over the body to be lifted. The grappling-irons are then made fast to it, and the rear end of lever C then depressed until strain is brought upon the body. The hand-lever F is then adjusted into such of the sockets formed by the pins *l* *l'* of straps D as will leave its outer end at a convenient height from the ground to apply the power with the greatest advantage. The lever F is then depressed as far as is necessary to raise the body above the sides of the sled, and lever C then turned around on its pivot until the stone is directly over the platform of the sled, when it can be lowered, and the grappling-irons detached and again applied in the same way to others until the sled is loaded, when it is hauled away wherever desired.

Where the body to be lifted on the sled rests somewhat below the surface of the ground, it may happen that it could not be raised high enough to be placed on the sled by a single adjustment and depression of the lever, as shown in dotted lines at O, where the lever is

shown as having been adjusted on the upper side of the lowest rear pin *l'*. In such case, after lever F has been so depressed, the front end of lever C is then temporarily propped, in order to keep it in that position until lever F can be removed and readjusted, so as to get a fresh prise, as shown in dotted lines at *p*; or the stone itself may be propped up by levers or stones, or other suitable means, until the adjustment has been made. By this means the front end of lever C can then be further raised, and the operation again repeated, if necessary, until the lower side of the body raised can clear the upper sides of the sled, when lever C can be turned so as to bring the body thus raised over the platform of the sled, and then lowered thereon, as before described.

I have described a sled as the medium of transporting the stones thus raised; but it is obvious that the apparatus can be equally as well applied to a suitable wagon, and it will also be apparent that the apparatus may be as advantageously employed as a stump-extractor as for raising stones or other heavy and unwieldy bodies.

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

1. The combination of the working lever C, as provided with guide-stay straps E, with the pivotal standard B and platform *a*, substantially as set forth.

2. A lever, C, provided with straps D, and two rows of lever-sockets, substantially as formed by pins *l* *l'*, for the purposes set forth.

3. A lever, C, provided with guide-straps E and straps D, for the support of the bearings *l* *l'* of the adjustable handspike F, in combination with a supporting and pivotal standard, B, substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

LUTHER J. HOUSE.

Witnesses:

JOTHAM CUMMINGS,  
CHARLES E. BENNETT.