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[illegible]

Witnesses;
John Gass
M. E. Colby.

Inventor;
Ira Flanders
Per. D. C. Cully
Atty.

United States Patent Office.

IMPROVEMENT IN STUMP-EXTRACTOR.

IRA FLANDERS, OF LAFAYETTE, MICHIGAN.

Letters Patent No. 59,904, dated November 20, 1866.

SPECIFICATION.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, IRA FLANDERS, of Lafayette, Van Buren county, State of Michigan, have invented certain new and useful improvements in Machines for Extracting Stumps, and for raising heavy weights; and I do hereby declare the following to be a full and exact description of the same, reference being had to the drawings that accompany and form a part of these specifications, in which—

Figure I, a perspective view of the machine with stump attached.

Figure II shows the manner of wrapping the stump, and the way of using the grab-link on the chain.

Figure III, the two grab-links—the one made plane, the other curved—each having a broad, oval opening at one end, and a narrow neck at the other end.

Letters A A' the two bed-pieces of the frame-work of the machine; B a beam at top, running across from side to side; the figs. 1, 2, 3, 4, 5, and 6 the uprights that sustain the beam B; C the principal lever, as seen in the drawings; D a small lever with which to bring down the short end of the principal lever, C, when it is desired to make fast to the stump; E the main chain; F a large pin to sustain the link, *g*; *h h'* the two grab-links; *i i i i* rods with hooks on their ends, and, together with the bolts, *j j j j*, fasten more firmly the bed-pieces, A A', to the standards, 1, 2, 3, 4, 5, and 6; *k* an ordinary tackle-block.

The object of my invention is to provide a machine that has more facilities for adapting the leverage to the resistance to be overcome, and the power that may be available at any time, as also to afford a more ready way of manipulating the chains. The first I secure by arranging the series of slats on the top of the short arm of the principal lever, C, and the longitudinal slat, *m*, in connection with the link, *g*, and the pin, F, as seen in Fig. I. The latter I obtain by combining the principal chain, E, the two grab-links, *h h'*—the one hanging in the link *g*, as seen in Fig. I, the other arranged and used, as may be seen in Fig. II. The reason for using the links, *h h'*, instead of hooks is, that the chain, E, needs to be made of very short links in order to wrap the stump well, and with such a chain hooks of any considerable strength could not well be used. A glance at Figs. I and II will show how readily the slack of the chain, E, may be taken up at either end simply by moving it into the swell of the links, *h*, drawing it tight, and then let it drop into the neck or narrow part of the link again, where it will be held firmly. The manipulations of the other parts of the machine will be apparent from the drawings.

What I claim as my invention, is—

1. Providing the lever C, with the slot *m*, and the recesses for the pin, F, in combination with the said pin F, and link *g*, and lever D, arranged substantially as described and for the purposes set forth.
2. I claim the combination of the hooks or bolts, *j j j j*, the braces, *i i i i*, with the bed-pieces, A A, to operate as set forth.

IRA FLANDERS.

Witnesses:

DANIEL C. COLBY,

CHARLES E. SEVERANCE.