

(No Model.)

D. L. GROSSMAN.

STUMP PULLER.

No. 306,916.

Patented Oct. 21, 1884.

Fig: 1.

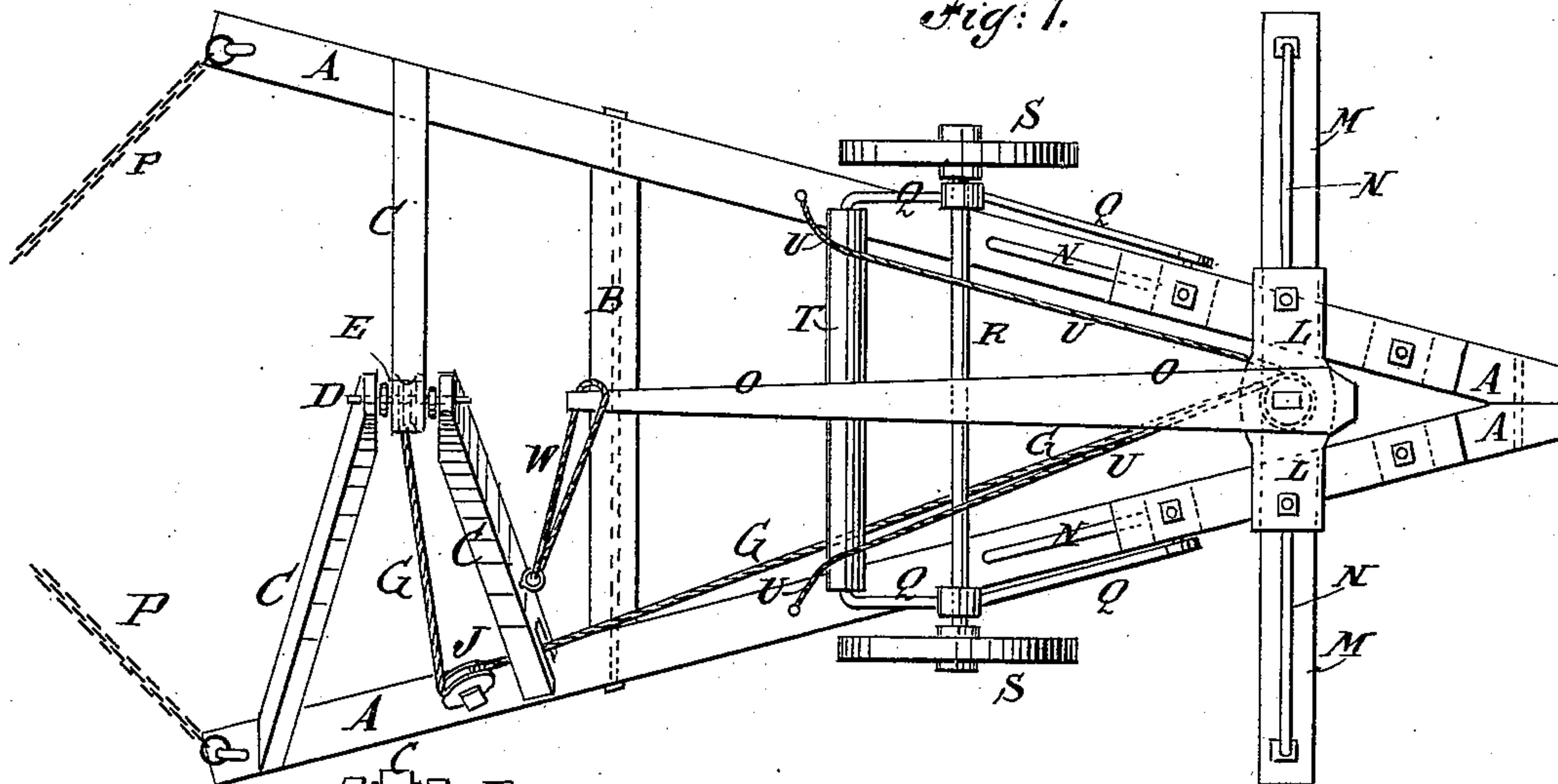


Fig: 2.

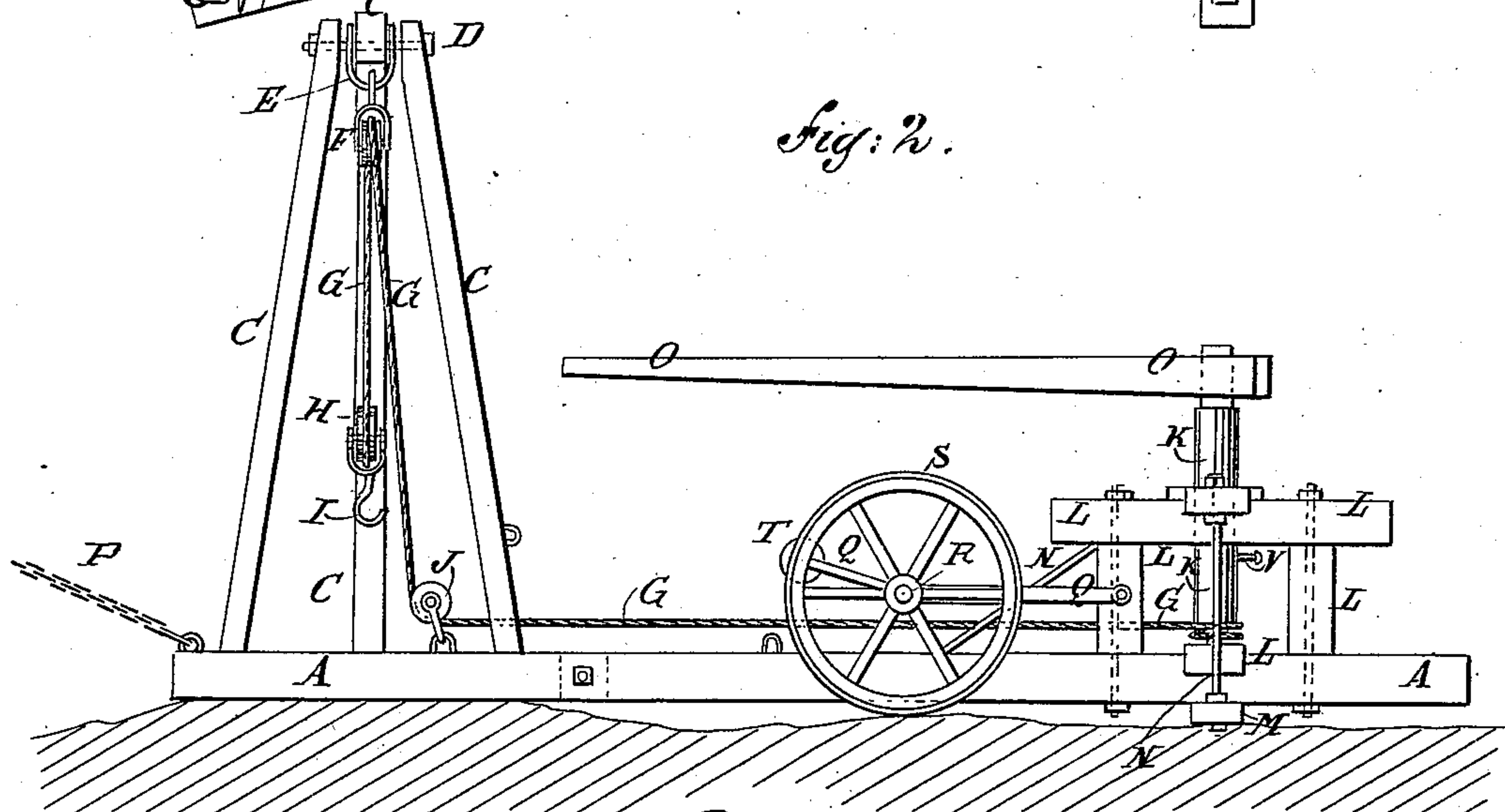
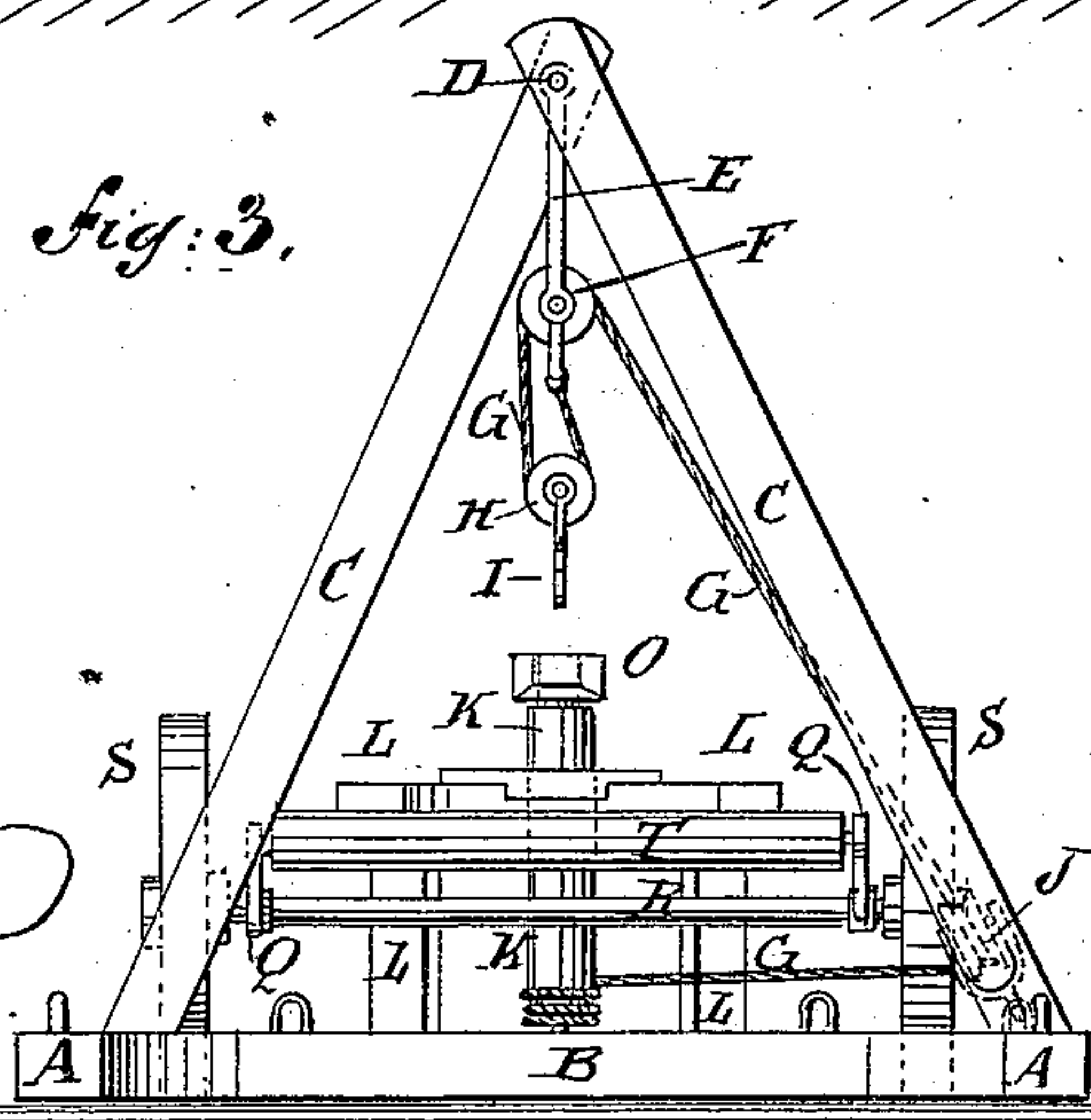


Fig: 3.



WITNESSES:

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## STUMP-PULLER.

SPECIFICATION forming part of Letters Patent No. 306,916, dated October 21, 1884.

Application filed August 28, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, DAVID L. GROSSMAN, of Rutland, in the county of Marshall and State of Indiana, have invented a new and useful  
5 Improvement in Stump-Pullers, of which the following is a full, clear, and exact description.

Reference is to be had to the accompanying drawings, forming part of this specification, in  
10 which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of one of my improved stump-pullers. Fig. 2 is a side elevation of the same. Fig. 3 is a front elevation  
15 of the same.

The object of this invention is to provide stump pullers so constructed as to be easily operated, and which shall be simple in construction and powerful in operation.

20 The invention consists in a stump-puller constructed with a base-frame provided at its forward part with bars, supporting pulley-blocks, and a rope or chain, and at its rear end with a capstan and sweep for pulling the  
25 stumps. The frame of the machine is provided with hinged bars carried by wheels and an axle, and carrying a roller with a rope and with a loop whereby the machine can be readily suspended from the said wheels and axle, and taken from place to place, as will be hereinafter fully described.

A are the base-bars, which are designed to be about twenty-two feet in length, and which meet at their rear ends at an acute angle and  
35 are securely bolted to each other. The base-bars A are connected at a little distance from their forward ends by a cross-bar, B, about nine feet in length.

To the forward part of one of the base-bars  
40 A are attached the lower ends of two bars, C, and to the forward part of the other base-bar A is attached the lower end of a third bar, C. The upper ends of the three bars C meet and are secured to each other by a bolt, D, which  
45 also passes through the eyes of a clevis, E. From the clevis E is suspended a pulley-block, F, over the pulleys of which passes a wire rope or chain, G. The rope or chain G also passes around the pulleys of a loose block, H,  
50 which is provided with a hook, I, to receive a chain to be attached to the stump or root to be drawn.

I prefer to use an upper block, F, with two pulleys and a lower block, H, with a single pulley; but both blocks may have single pulleys, or each block may have two pulleys, as  
55 may be desired.

The rope or chain G passes around a guide-pulley, J, pivoted to a support attached to one of the base-bars A, passes through a slot  
60 in the lower end of the rear bar, C, and passes thence to the drum K of the capstan, and is secured to the said drum.

The capstan-frame L is attached to the rear ends of the base-bars A, and to the said rear  
65 ends is also attached the middle part of a cross-bar, M, to form a support for the lower ends of the side braces, N, attached to the upper part of the said capstan-frame to strengthen the said capstan-frame laterally. The capstan-frame is strengthened in place longitudinally  
70 by braces N, attached to its upper part and to the sills A.

The journals of the drum K revolve in bearings in the frame L, and the end of its upper  
75 journal is squared to receive the eye of the sweep O, to which the team is attached.

To the forward ends of the base-bars A are attached the ends of a chain, P, to the middle part of which the team is attached for draw-  
80 ing the machine from place to place.

To the rear parts of the base-bars A or to the capstan-frame L are hinged the rear ends of two bars, Q, with which, at a little distance from their forward ends, is connected the axle  
85 R of the wheels S. To the forward ends of the hinged bars Q is pivoted a roller, T.

U is a rope or chain the ends of which are attached to the middle parts of the base-bars A. The rope or chain U passes over the roller  
90 T, and is made of such a length that its middle part can be hooked upon a pin, V, attached to the capstan-drum K. With this construction by hooking the rope or chain U upon the pin V, and turning the capstan to wind  
95 up the said rope or chain U, the machine will be raised from the ground and suspended upon the wheels and axle S R, so that it can be readily drawn from place to place.

The machine, when suspended from the  
100 wheels and axle, is secured in place by passing the rope-loop W, attached to the rear bar, C, over the end of the sweep O, as shown in Fig. 1.



In using the machine it is drawn to the stump to be pulled, and one end of the chain P is detached and the machine is drawn over the said stump. The stump is then secured to the pulley-block H, and the team is attached to the sweep O and driven around the capstan, winding the rope or chain G around the drum K and drawing the stump from the ground.

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

1. A stump-puller constructed substantially as herein shown and described, and consisting of the base-frame A B M, the bars C, the pulley-block F H, the rope or chain G, and the capstan and sweep K L O, for pulling the stumps, and the hinged bars Q, the wheels and axle S R, the roller T, and the rope U, for moving the machine from place to place, as set forth.

2. In a stump-puller, the combination, with the base-frame A B M, of the bars C, the pulley-blocks, and rope or chain F H G, and the capstan and sweep K L O, substantially as herein shown and described, whereby stumps can be readily drawn from the ground, as set forth.

3. In a stump-puller, the combination, with the base-frame A B M, the bars C, and the capstan and sweep K L O, of the hinged bars Q, the wheels and axle S R, the roller T, the rope U, and the loop W, substantially as herein shown and described, whereby the machine can be readily suspended from the said wheels and axle, and taken from place to place, as set forth.

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Witnesses:

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