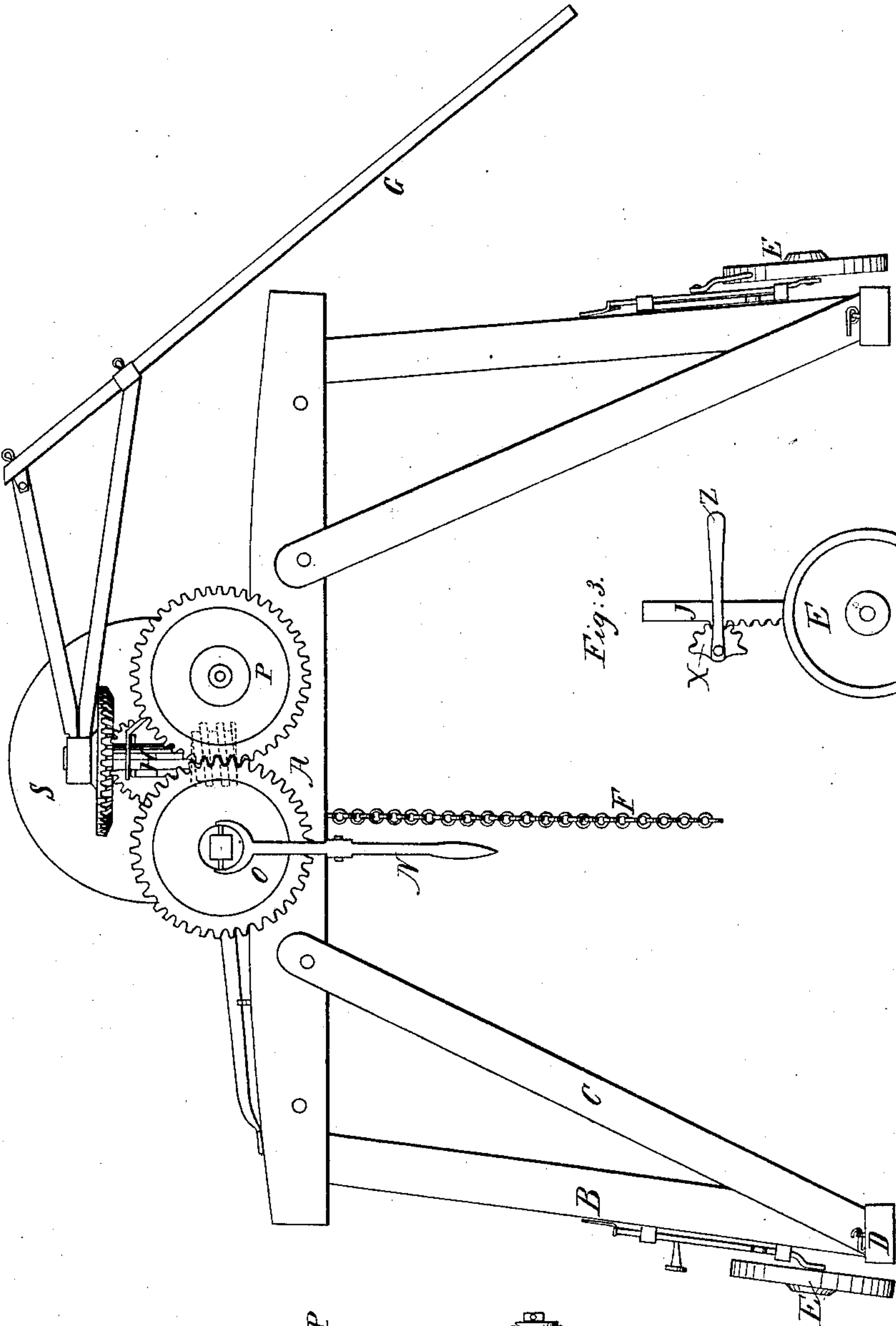


*L. C. English,*  
*Stump Elevator.*

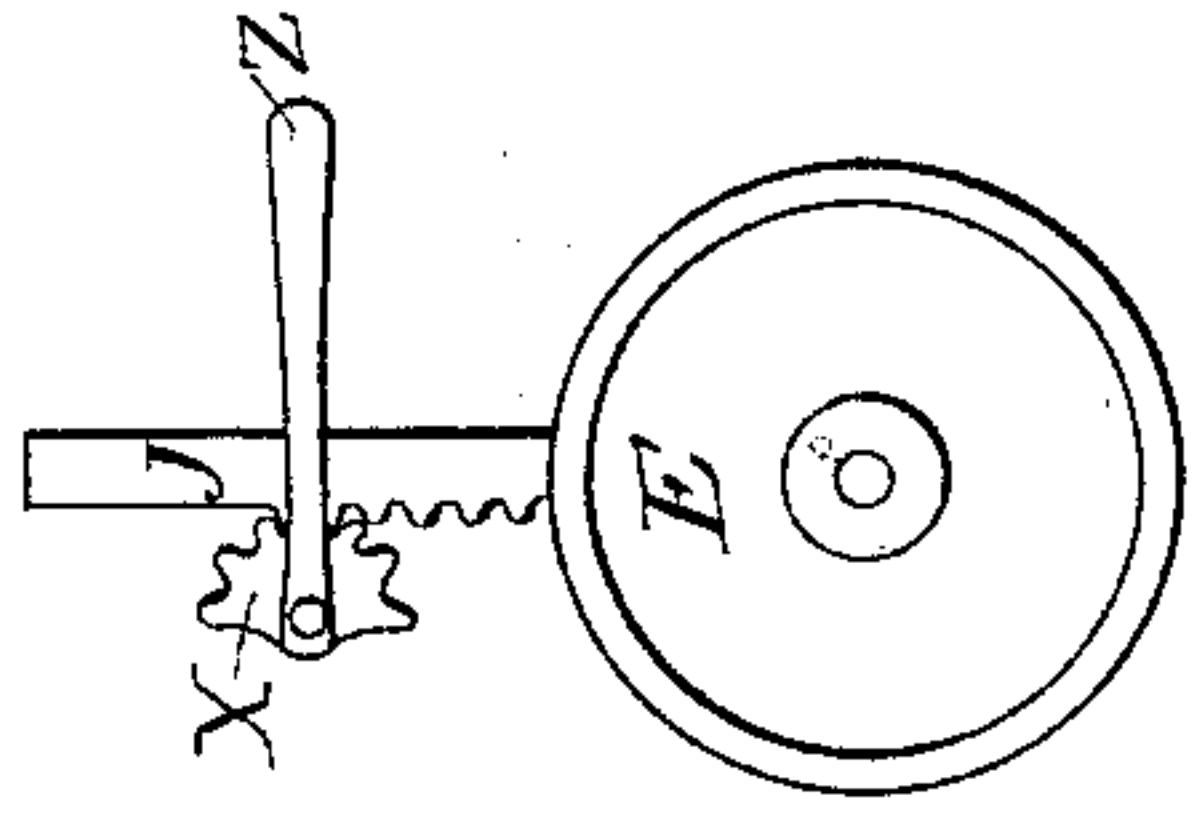
*No 27,949.*

*Patented Apr. 17, 1860.*

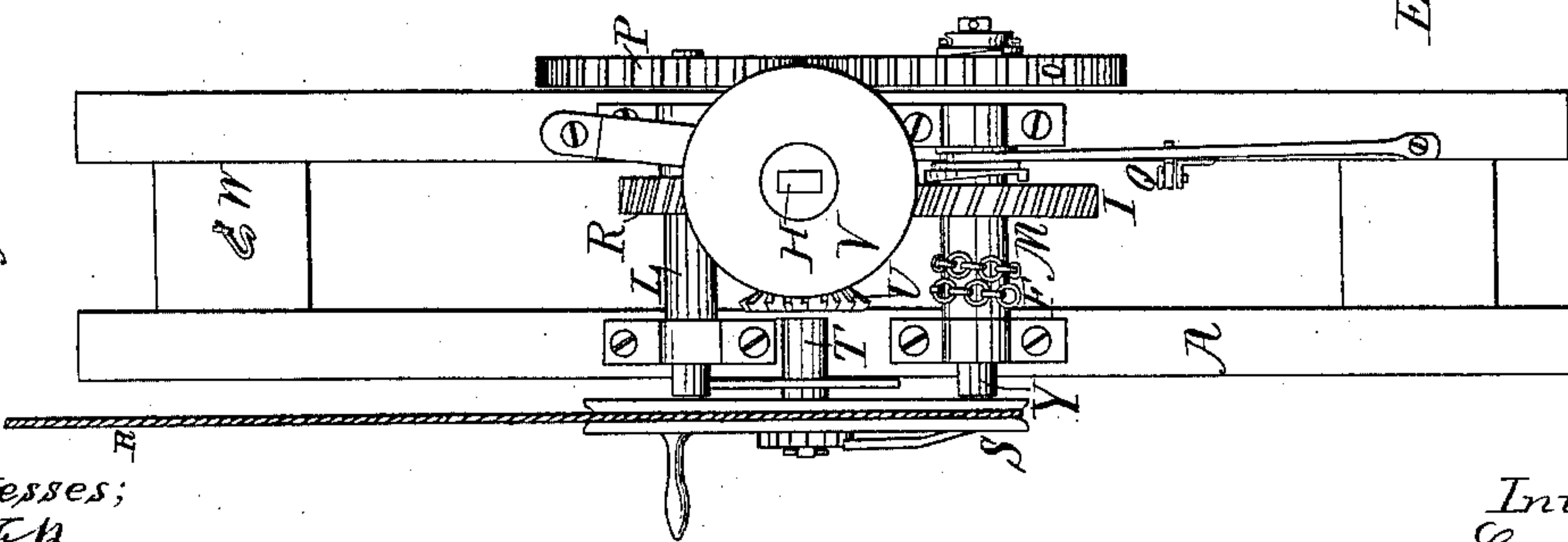
*Fig. 2.*



*Fig. 3.*



*Fig. 1.*



*Witnesses;*  
*Edm. F. Brown.*  
*Daniel Breed*

*Inventor;*  
*Lyon C. English*

# UNITED STATES PATENT OFFICE.

LUZON C. ENGLISH, OF CATON, NEW YORK, ASSIGNOR TO HIMSELF, AND GALUSHA M. ANGIER, OF WASHINGTON, DISTRICT OF COLUMBIA.

## STUMP-EXTRACTOR.

Specification of Letters Patent No. 27,949, dated April 17, 1860.

*To all whom it may concern:*

Be it known that I, LUZON C. ENGLISH, of Caton, in the county of Steuben and State of New York, have invented a new and useful  
5 Improvement in Stump-Extractors; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon.

10 The object of my invention is to construct a stump extractor adapted to pulling stumps, either on level ground, side hill, in orchards, near fences or buildings, and to perform the work in the most convenient manner.

15 My invention or improvement consists of a peculiar arrangement of the gears in connection with removable legs of peculiar construction and provided with adjustable rollers.

20 In the accompanying drawings Figure 1. is a top view of my stump extractor with the legs removed. Fig. 2. is a side view of my machine complete; Fig. 3. a roller detached.

The frame A, Fig. 2, is usually supported  
25 on four legs B, secured by braces C, and provided with foot pieces D, and adjustable rollers E.

When in operation the machine commonly rests upon the foot pieces D, the adjustable  
30 rollers E, being employed only for supporting the machine in moving from place to place. The machine hoisted upon these rollers is brought into proper position and the chain F, attached to the stump to be extracted. Then the shaft G, is turned by a  
35 horse in the usual manner, thus setting the screw shaft H, in revolution. The screw (see in dotted lines Fig. 2.) of this shaft gearing into the two spur wheels I, and K,  
40 sets the latter in motion and also, the axles L, M. These axles carry two gear wheels O, P. Both the spur wheel K, and the gear wheel P, are fixed so as to turn with axle L, but the wheels I and O, are loose upon  
45 the axle M, and may be fixed by two clutches N, and Q. When both clutches are released the axle M, turns independently, which is very convenient in unwinding the chain F. The chain being fastened upon the stump,

as above described, and the horse started, the  
50 wheel I is fixed by the clutch Q, until the stump is started, then the wheel O, is also fixed bringing into operation the wheels, K, P, O. The speed of the machine is thus increased and the operation of hoisting the  
55 stump is hastened. This double gearing affords great power at first while starting the stump and increased speed after the stump has been loosened and thus facilitates the whole operation. 60

In situations where the horse cannot walk around the machine, as in orchards, near buildings etc. the shaft G, is removed and the horse is attached to the rope R, upon wheel S, Fig. 1. This wheel sets the shaft  
65 T, and bevel gear wheel U, in motion and by means of bevel gear wheel V, operates the screw shaft H, and thus the whole machine. By the use of rope R, the horse can travel off in a straight line instead of passing  
70 around the machine in a circle as with the shaft G. When the rope is employed it will be necessary to anchor the machine to prevent the latter from sliding or being dragged horizontally. This may be done by a chain  
75 attached to the hook W, and fastening the machine to another stump or fixed object. The wheel S, may be removed when the shaft G, is employed.

Fig. 3 represents a side view of one of the  
80 rollers E, and the ratchet bar and half ratchet wheel by which the machine is hoisted upon the roller. By placing the hand on lever Z, the ratchet wheel X, and the ratchet bar J, are easily operated thus  
85 elevating or depressing the wheel E, at pleasure.

The form of my machine may be somewhat varied without departing from my invention. 90

I do not broadly claim the use of a screw shaft operating a spur wheel.

Having thus fully described my invention what I claim and desire to secure by Letters Patent of the United States is: 95

1. The above described stump extractor provided with two sets of gearing consisting of shafts L, M, with their spur wheels, cog



wheels and clutches, all arranged and operated substantially as set forth for the purposes described.

2. I claim the use of the wheels S, and U,  
5 in combination with the double gears above claimed substantially as described for the purposes specified.

3. I claim the adjustable wheels E, in combination with the foot pieces D, substantially as described.

L. C. ENGLISH.

Witnesses:

DANIEL BREED,  
EDM. F. BROWN.