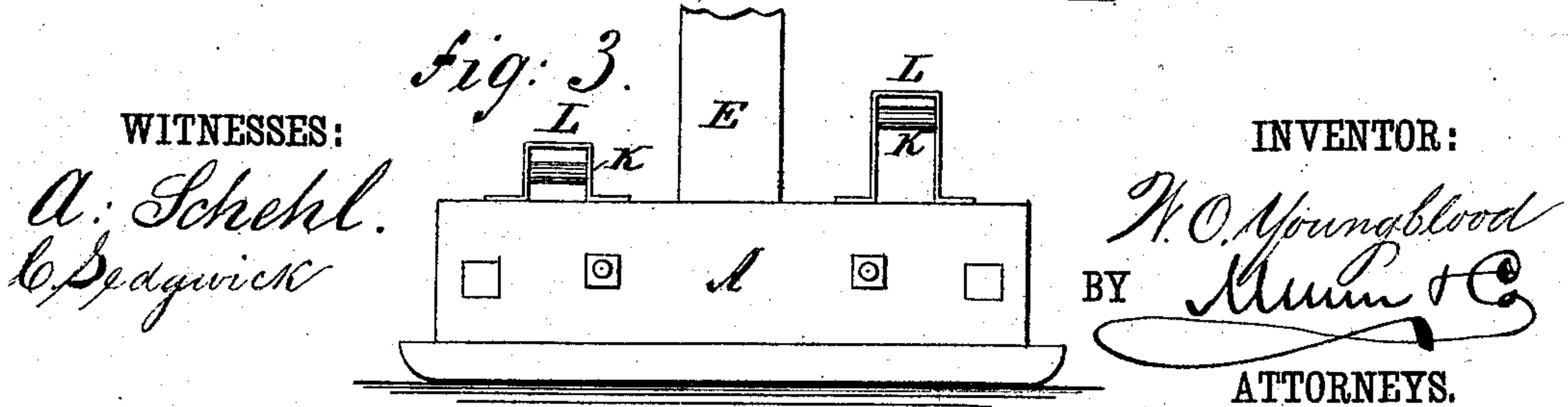
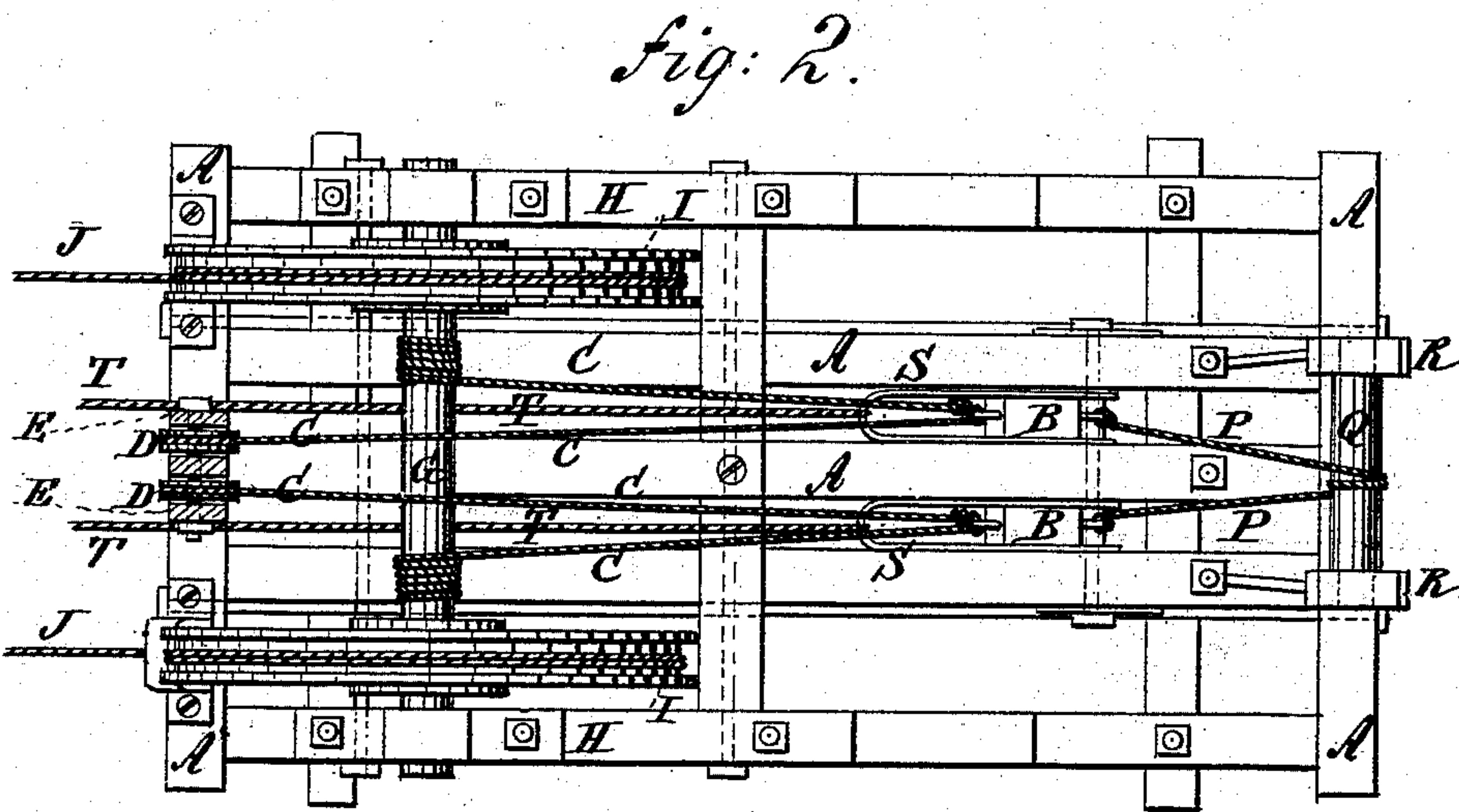
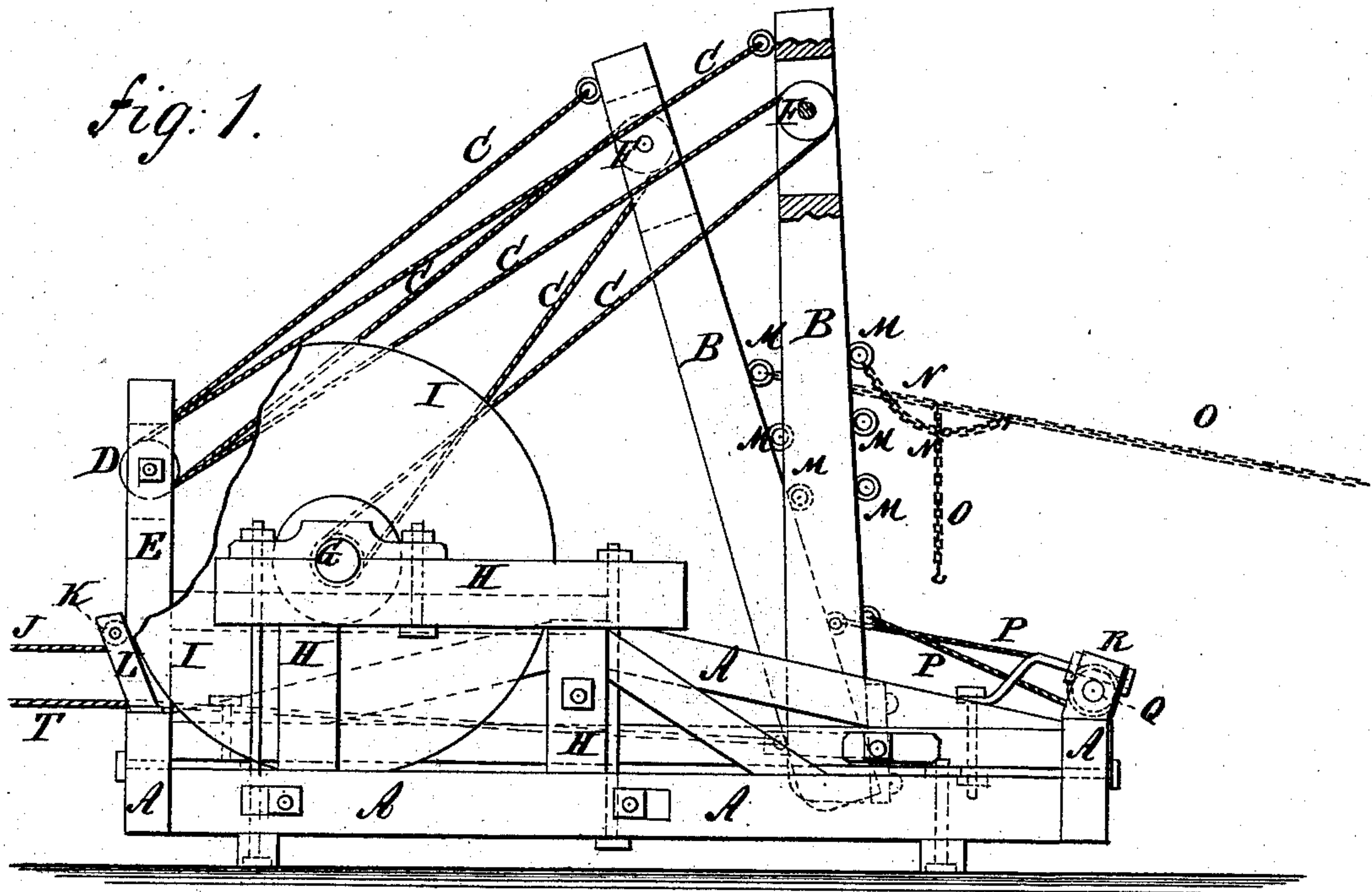


(Model.)

W. O. YOUNGBLOOD.  
Stump Puller.

No. 235,842.

Patented Dec. 21, 1880.





# UNITED STATES PATENT OFFICE.

WILLIAM O. YOUNGBLOOD, OF CEDAR SPRINGS, MICHIGAN.

## STUMP-PULLER.

SPECIFICATION forming part of Letters Patent No. 235,842, dated December 21, 1880.

Application filed November 1, 1880. (Model.)

*To all whom it may concern:*

Be it known that I, WILLIAM O. YOUNGBLOOD, of Cedar Springs, in the county of Kent and State of Michigan, have invented a new and useful Improvement in Stump-Pullers, of which the following is a specification.

Figure 1 is a side elevation of the improvement, parts being broken away. Fig. 2 is a plan view. Fig. 3 is an elevation of the lower part of the forward end.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish stump-pullers so constructed as to operate upon the stump with immense power, and which shall be simple in construction and convenient in use.

The invention consists in constructing a stump-puller of a frame, two levers pivoted to the frame and having eyebolts to receive the pulling-chains to apply the power to the hitch-chain, two ropes and their guide-pulleys for connecting the levers with the power, the shaft having the connecting-ropes wound around it in different directions, the two rope-wheels, and the two draw-ropes wound in different directions around the rope-wheels.

In the accompanying drawings, A represents the frame of the machine, which is formed of longitudinal timbers, cross-timbers, and braces firmly bolted together and strengthened by tie-rods. To the rear part of the frame A are hinged by a strong bolt the lower ends of two levers, B. To the upper end of each of the levers B is attached the end of a rope, C, which passes around a pulley, D, pivoted to an upright, E, firmly attached to the forward part of the frame A. From the pulley D the rope C passes back to and around a pulley, F, pivoted in a slot in the upper part of the lever B. From the pulley F the rope C passes to a shaft, G, to which it is attached and around which it is wound, the two ropes being wound around the shaft G in opposite directions, so that one rope will be unwound from the said shaft by the winding up of the other rope. The shaft G revolves in bearings in upright frames H, firmly secured to the forward side parts of the frame A.

To the end parts of the shaft G are attached two large rope wheels or drums, I, to which

are attached the ends of the draw-ropes J. The ropes J are wound in opposite directions around the wheels I, pass around guide-rollers K, pivoted to supports L, attached to the forward end of the frame A. One of the draw-ropes J passes beneath its guide-roller K, and the other rope over its guide-roller K, for which reason one of the said rollers is placed a little higher than the other, as shown in Fig. 3, so that the ropes will pass out about upon a level.

To the rear sides of the levers B are attached a number of eyebolts, M, to receive the ends of the pulling-chains N, so that the said chains N can be attached to the levers B closer to or farther from the fulcrums of the said levers, according as more or less power is required to be applied to the stump. The other ends of the pulling-chains N are hooked into the links of the chain O, which is hitched to the stump to be pulled.

To the lower parts of the levers B are attached the ends of a rope, P, the middle part of which makes one or more turns around a roller, Q, pivoted to supports R, attached to the rear end of the frame A. By this construction the forward movement of one of the levers B will draw the other lever rearward, so as to slacken its pulling-chain N and allow it to be hooked farther back from the hitch-chain O.

To the fulcrum-bolt of the levers B are attached two clevises, S, to which are attached two ropes, T, or the ends of a single rope. The ropes or rope T projects at the forward end of the frame A, for convenience in moving the machine and in anchoring it to a stump or other suitable object when in use.

In using the machine the chain O is hitched to the stump to be pulled and the chains N are hooked into it. A horse is hitched to the end of each draw-rope J, and the horses are driven forward the length of their draw-ropes and then backed, each horse always moving forward while the other is moving rearward. As each horse moves forward its lever B is drawn forward, drawing the stump with it and drawing back the other lever, and slackening the other pulling-chain N, so that it can be hooked farther back in the hitch-chain O, ready to pull upon the stump in its turn, each lever B holding the stump until the other lever

is ready to pull upon it, so that the stump cannot settle back.

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

1. A stump-puller constructed substantially as herein shown and described, consisting of the frame A, the two levers B, the two ropes C and their pulleys D F, the shaft G, the two  
10 rope-wheels I, the two draw-ropes J, the rope P and the roller Q, and the eyebolts M, to receive the pulling-chains N, as set forth.

2. In a stump-puller, the combination, with the frame A, of the two levers B, having eye-

bolts M, to receive the pulling-chains N, the two 15 connecting-ropes C and their pulleys D F, the shaft G, having the ropes C wound around it in different directions, the two rope-wheels I, and the two draw-ropes J, wound around the rope-wheels in different directions, substan- 20 tially as herein shown and described, whereby the levers B are made to pull alternately upon the hitch-chain, as set forth.

WILLIAM ONS YOUNGBLOOD.

Witnesses:

CHARLES S. KIDDER,  
JOHN E. NELSON.