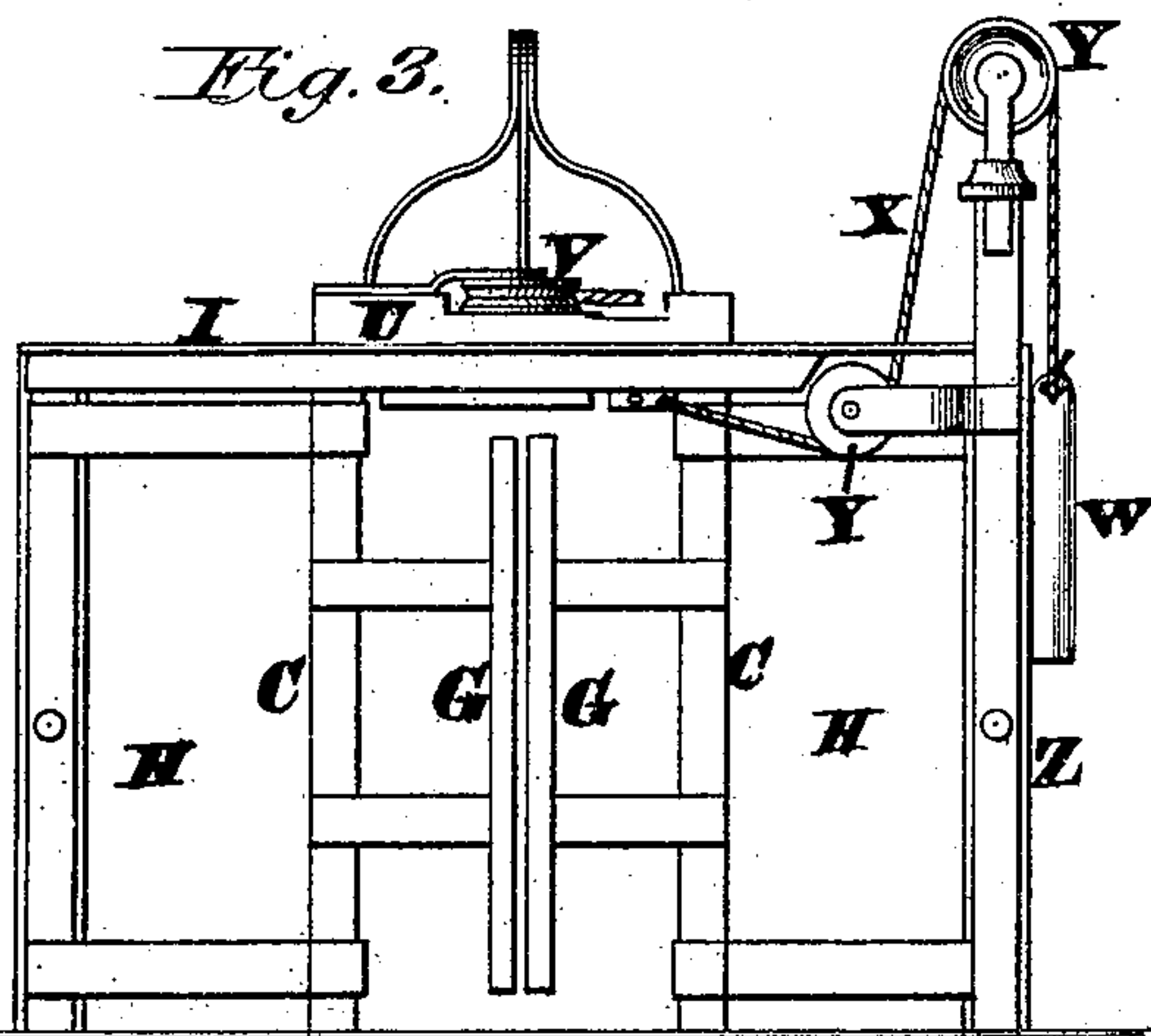
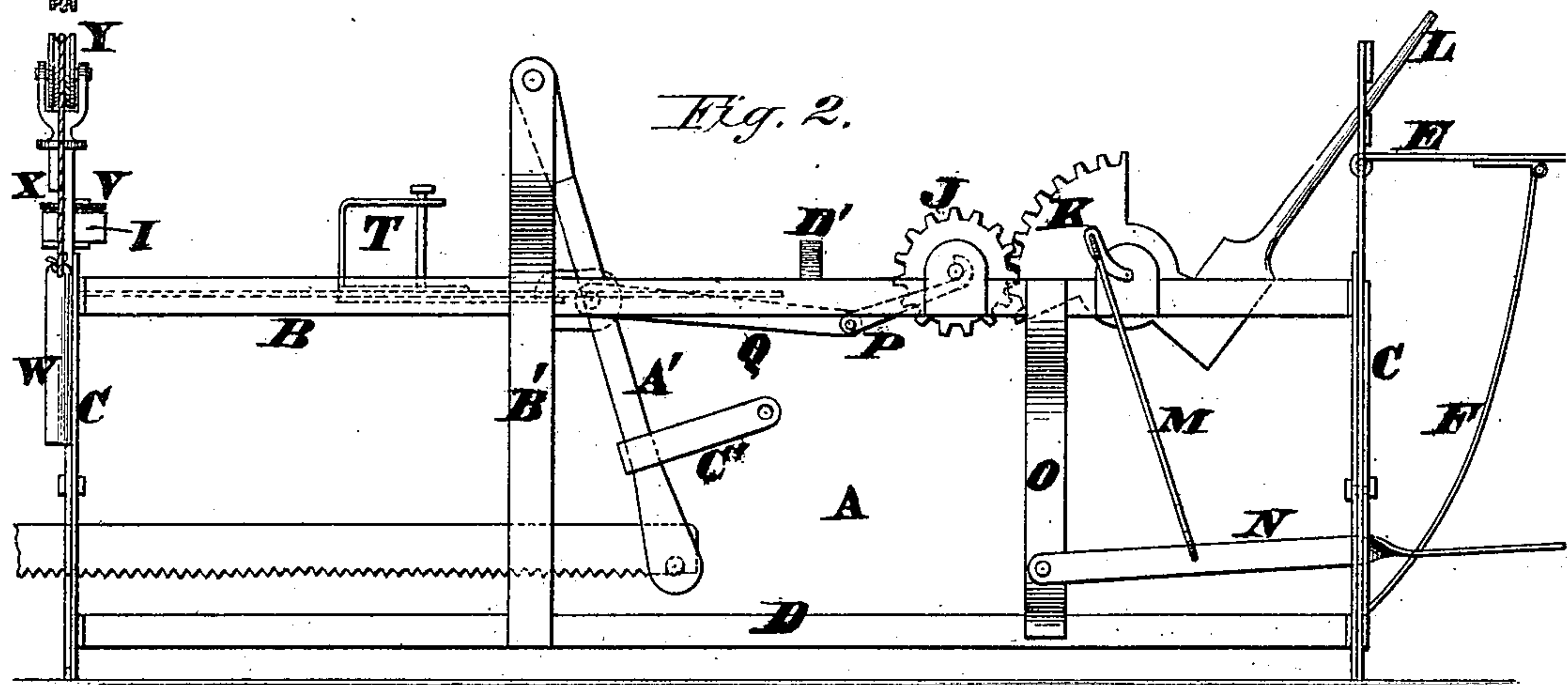
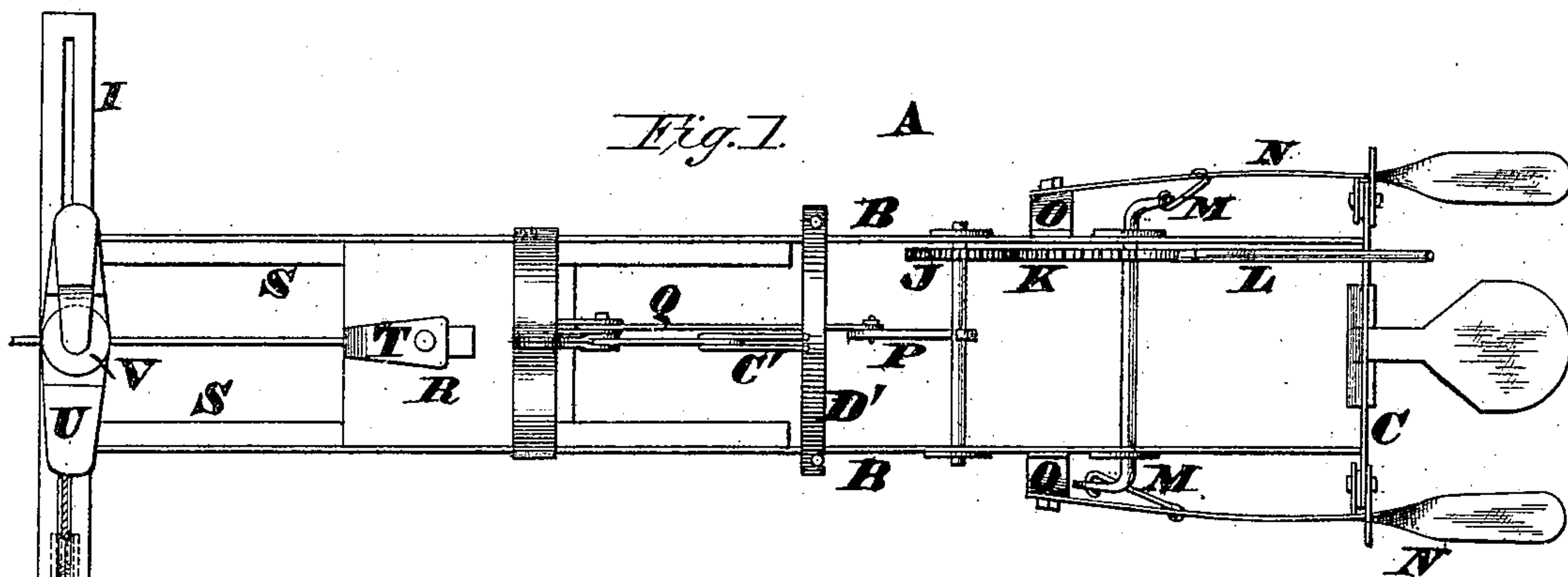


A. WILKINS.  
 Drag-Sawing Machine.

No. 228,237.

Patented June 1, 1880.



Witnesses:

*J. B. Brown*  
*S. J. Hiles*

Inventor:

*Asa Wilkins*

# UNITED STATES PATENT OFFICE.

ASA WILKINS, OF CINCINNATI, OHIO.

## DRAG-SAWING MACHINE.

SPECIFICATION forming part of Letters Patent No. 228,237, dated June 1, 1880.

Application filed October 3, 1879.

*To all whom it may concern:*

Be it known that I, ASA WILKINS, of Cincinnati, in the county of Hamilton and State of Ohio, have invented a new and Improved  
5 Crosscut or Drag Sawing Machine; and I do hereby declare the following to be a full, clear, concise, and exact description of the same, sufficient to enable those skilled in the art to make and use the same, reference being had  
10 to the accompanying drawings, forming part of this specification, wherein—

Figure 1 is a top view of my improved machine. Fig. 2 is a side elevation, and Fig. 3 is a front elevation, of the same.

15 Similar letters of reference in the accompanying drawings denote the same parts.

My invention relates to that class of machines for sawing wood, logs, timber, &c., commonly known as "drag-saws;" and it has for  
20 its object to cut down standing trees as well as to saw them up into logs after they are cut down.

To this end the invention consists in the mechanism adapted to operate the saw for  
25 cutting down a standing tree and for sawing it into lengths after it has fallen, as I will now proceed to describe.

In the accompanying drawings, A represents the frame of my sawing-machine, composed of  
30 wood or metal. If the latter material is employed in its construction, I prefer it in the form of gas-pipe, as combining cheapness with requisite lightness and strength.

The frame is constructed of two side pieces, B B, supported at the ends by uprights C C,  
35 and of two sill-pieces, D D, also joined to the upright supports, the whole being suitably braced and stiffened laterally. The rear uprights extend above the side pieces, and are  
40 connected together at their upper ends to form a frame, to which the operator's seat E is attached, such seat being braced from the lower part of the frame by the leg F, and projecting to the rear, so as to occupy a position between  
45 the treadles and hand-lever.

The front end of the frame between the uprights is provided with two parallel vertical pieces, G G, between which the saw is guided when cutting a fallen tree into lengths, and  
50 it is also provided with two wings, H H, one on each side, to support a slotted top guide, I,

and form a way for the devices that hold the saw into a standing tree.

J is a gear-wheel mounted upon a shaft, having its bearing in the side pieces of the  
55 frame, and K is a segmental gear engaging with the wheel J, and also mounted upon a cross-shaft in the frame.

The segmental gear or its shaft carries the hand-lever L, which projects rearward, so as  
60 to be grasped by the operator on the seat E, and the end of the shaft forms cranks connected by rods M with the treadles N, pivoted to side bars, O, of the frame, and projecting rearward beneath the seat to receive the feet  
65 of the operator.

The shaft of the gear J carries a right arm, P, for connecting with a pitman, Q, for operating the saw in either of the positions above  
70 named.

For cutting down a standing tree the pitman is jointed to a cross-head, R, arranged upon ways S S, attached to the proximate sides of the frame-pieces B B, and the cross-head carries the saw upon it by means of a clevis  
75 and pin, T. The rear end of the saw, of course, rests flatwise upon the clevis, and is held by the pin; but its front end is supported by a block or carriage, U, mounted upon the guide I, and provided upon its under side with a long  
80 tenon or strip to enter the groove in said guide, and thereby form means for properly directing the carriage in its movements.

The back of the saw rests against a grooved pulley, V, mounted upon the carriage, to re-  
85 duce the friction upon the saw during its reciprocations, and the carriage is connected to a weight, W, by means of a cord, X, passing over grooved pulley Y, joined in the front of the frame and in an upright, Z, thereof, as  
90 shown in Fig. 3.

To operate the saw against a standing tree the carriage is first pushed outward to the limit of the slot opposite the upright Z, and then released, so that the weight shall pull the saw  
95 on the carriage against the side of the tree. The operator seated upon the seat then alternately moves the hand-lever and treadles, thereby imparting an oscillating motion to the gearing, which, in its turn, vibrates the rigid  
100 arm P to reciprocate the pitman, cross-head, and saw. As the saw operates it is fed into



the tree by the action of the weight upon the carriage, as will be readily understood.

If it is desired to cut a fallen tree into logs, the saw is detached from the cross-head and 5 attached to the lower end of a pendent bar, A', pivoted at its upper end to additional uprights B' on the frame-work, the saw being turned teeth downward and inserted in the guide formed by the vertical strips G G at the front 10 of the frame. The pitman is then detached from the cross-head and pivoted to a short arm, C', projecting rearward from the pendent bar A'. After the saw thus arranged has been placed upon the log the mechanism is operated 15 to reciprocate it as above described, the pendent bar A' vibrating freely to hold up and guide the rear end of the saw.

If desired, two saws may be operated at the same time, one to cut down the tree and the 20 other to saw logs upon the ground; but in this case the saws must be separately connected to the rigid arm P.

A brace, D', may be employed to connect the side pieces, B, of the frame between the 25 gears and ways for the cross-head, for the purpose of strengthening or stiffening the frame when the saw is at work; and this brace may

be pivoted at one end and arranged to catch over a pin at the opposite end, so as to be swung out of the way or swung across and 30 locked to the side pieces when desired.

Having thus described my invention, what I claim is—

1. The frame A, provided with the cross-head for operating the saw in a horizontal po- 35 sition, and the pivoted vertical bar A', for operating the saw to cut a fallen log, the bar and cross-head being capable of connection to the driving mechanism, substantially as described.

2. The horizontally-moving weighted car- 40 riage U, provided with the guide-pulley V for the saw, in combination with the slotted guide I, substantially as described, for the purpose specified.

3. The combination of the gearing J K, op- 45 erated by the hand-lever and treadles, with the pitman and cross-head for reciprocating the saw to cut a standing tree, substantially as described.

ASA WILKINS.

Witnesses:

J. R. P. BROWN;  
CYRUS BEEBE.