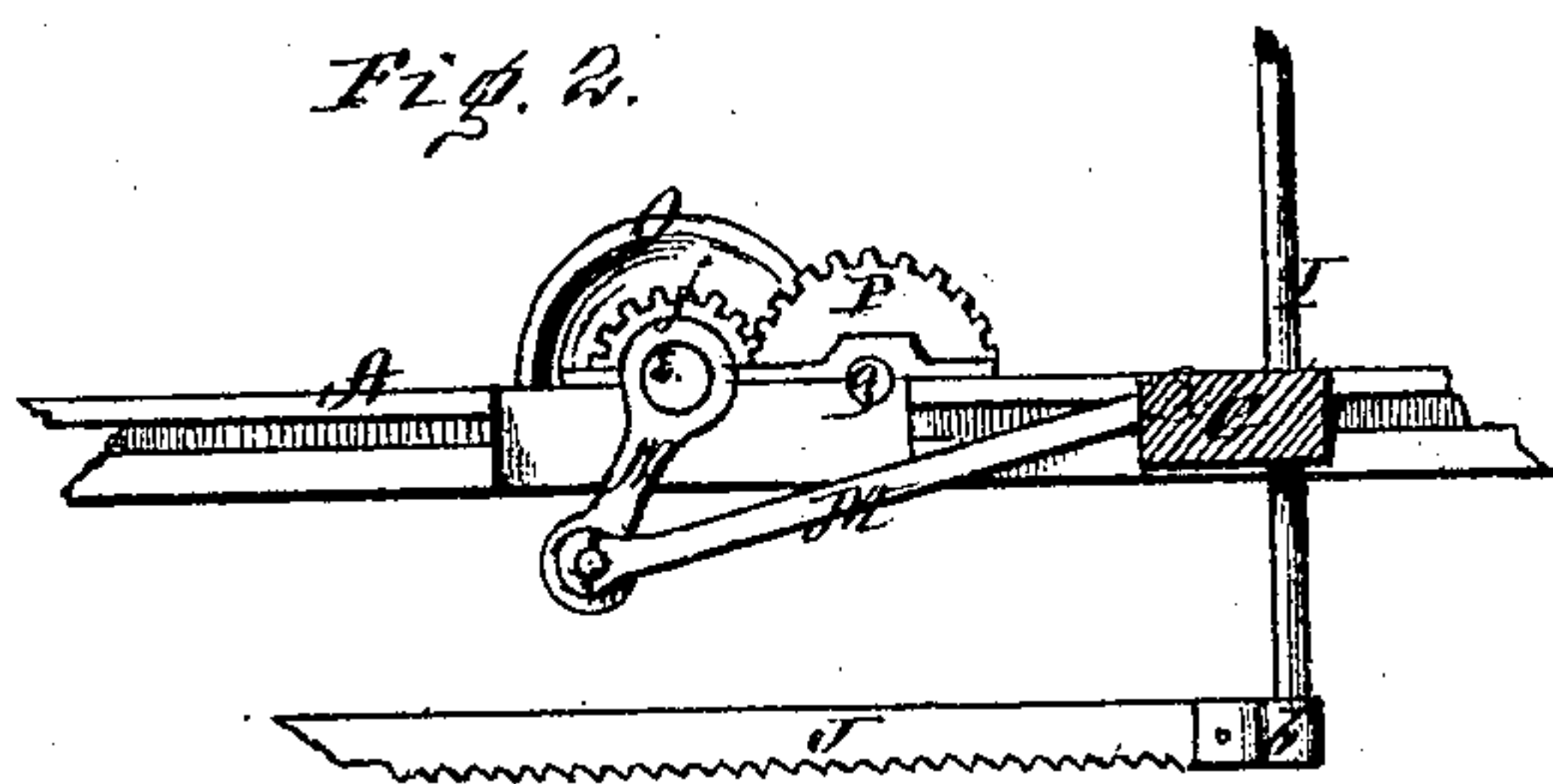
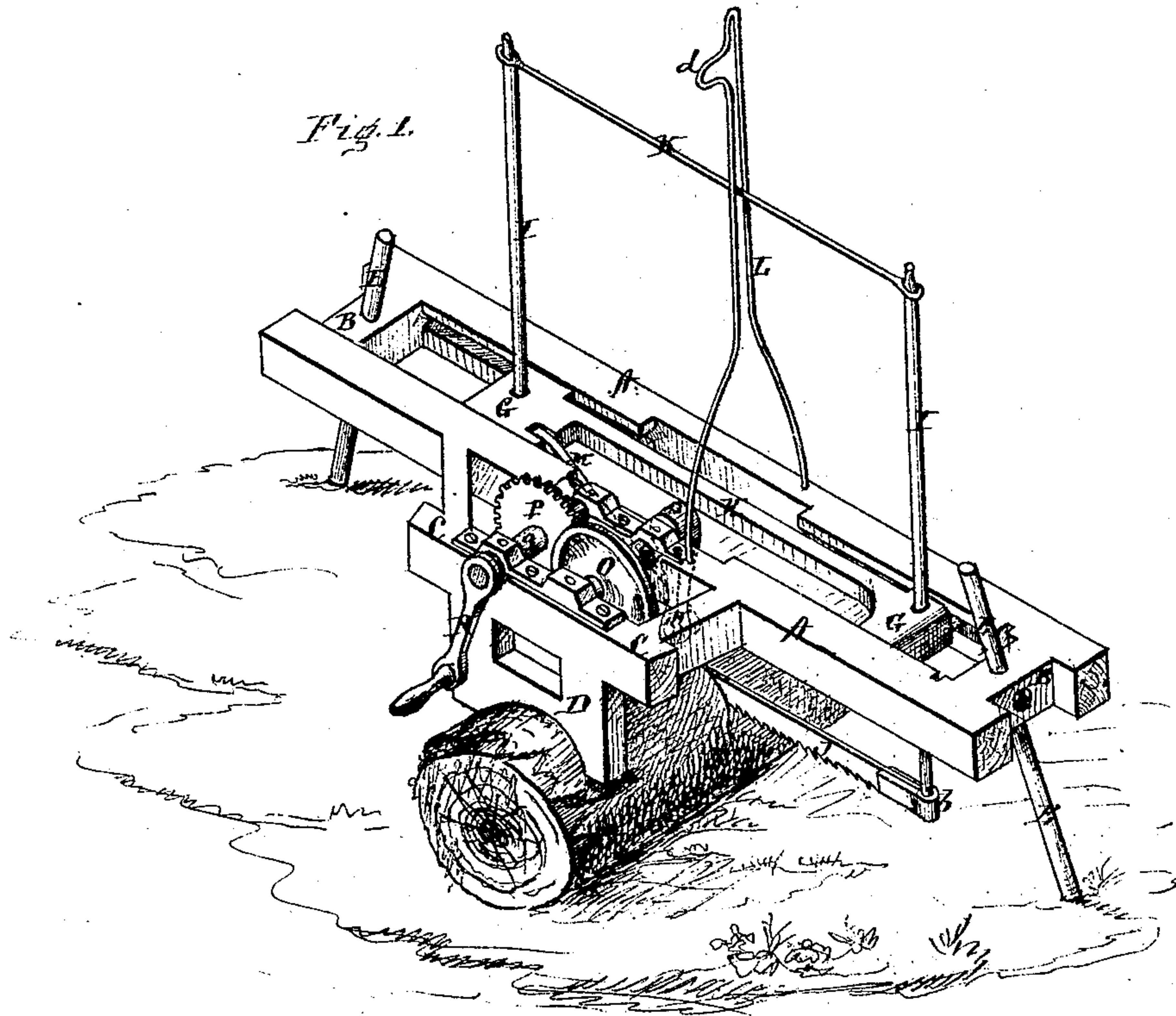


G. W. Boll,

Drag Saw.

No. 103709.

Patented May 31, 1870.



Witnesses  
Ed. Ewert,  
A. W. Marr

Inventor.  
George W. Boll  
per Alexander Mason  
Atty.

# United States Patent Office.

GEORGE W. BOLL, OF COLUMBUS, INDIANA.

Letters Patent No. 103,709, dated May 31, 1870.

## IMPROVEMENT IN SAWING-MACHINES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, GEORGE W. BOLL, of Columbus in the county of Bartholomew, and in the State of Indiana, have invented certain new and useful Improvements in Cross-Cut Sawing-Machines; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, and to the letters of reference marked thereon, making a part of this specification.

The nature of the invention consists in the construction and arrangement of the mechanism for operating a cross-cut saw.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a perspective view of my entire machine; and

Figure 2 is a side view of the gearing operating the saw.

A A represent two parallel beams, placed a suitable distance apart, and connected at their ends by cross-pieces, B B.

On the outer side of one of the beams A is affixed a smaller frame, C, having a supporting frame, D, extending downward from its outer side.

The log to be sawed in two is placed on the ground, and the supporting-frame D placed at a suitable point on the same, the main frame A B being secured by stakes E E, which pass in an inclined position through the end pieces B B into the ground, and are secured in said end pieces by set-screws *a a*.

The inner sides of the two parallel beams A A are grooved longitudinally, and in said grooves are placed two cross-heads, G G, connected by means of a bar, H.

Through each of the cross-heads G passes a stiff rod or bar, I, which is allowed to move up and down through the cross-head.

The lower ends of the rods I I are inserted into sockets *b*, one at each end of the saw J, and the upper ends of said rods are connected, by means of another rod, K, so as to hold the saw stiff, this rod K passing through guide-rods L, as shown in fig. 1.

When the machine is in operation, the weight of the saw causes it to descend as it cuts into the log.

The saw J may be suspended by raising it up and placing the rod K into a hook or loop, *d*, formed at the upper end of the guide L.

The saw is operated in the following manner:

A pitman, M, connects one of the cross-heads G with a crank, N, placed on the inner end of a shaft, *e*, which is laid in suitable bearings across the side frame C.

On the shaft *e* are placed a fly-wheel, O, and a pinion, *f*, which latter gears with a cog-wheel, P, placed upon another shaft, *g*, and turned by the crank R.

This machine can readily be moved to any place where it is desired to use the same.

Having thus fully described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination of the saw-connecting uprights I I, cross-bar K, and the forked guide-rod L with loop *d*, all substantially as set forth.

2. The arrangement of the frames A B C, braces E, upright D, shafts *e g*, pinion *f*, cranks R N, and pitman M, which operate the saw when connected to the uprights I, which pass through the cross-heads G, all as herein set forth.

In testimony that I claim the foregoing, I have hereunto set my hand this 2d day of April, 1870.

GEORGE W. BOLL.

Witnesses:

JOSEPH B. PEDRICK,  
JAMES H. EVANS.