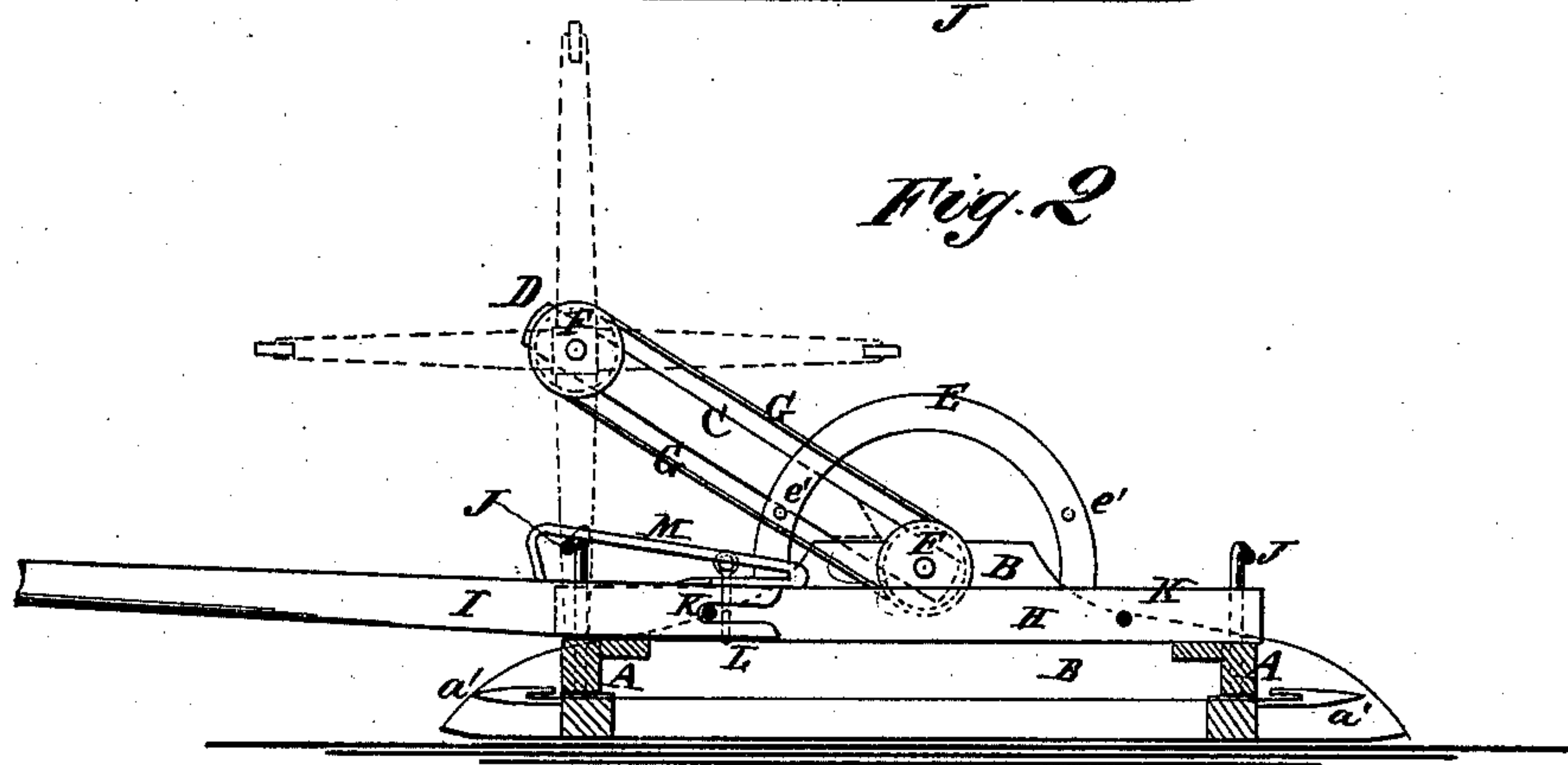
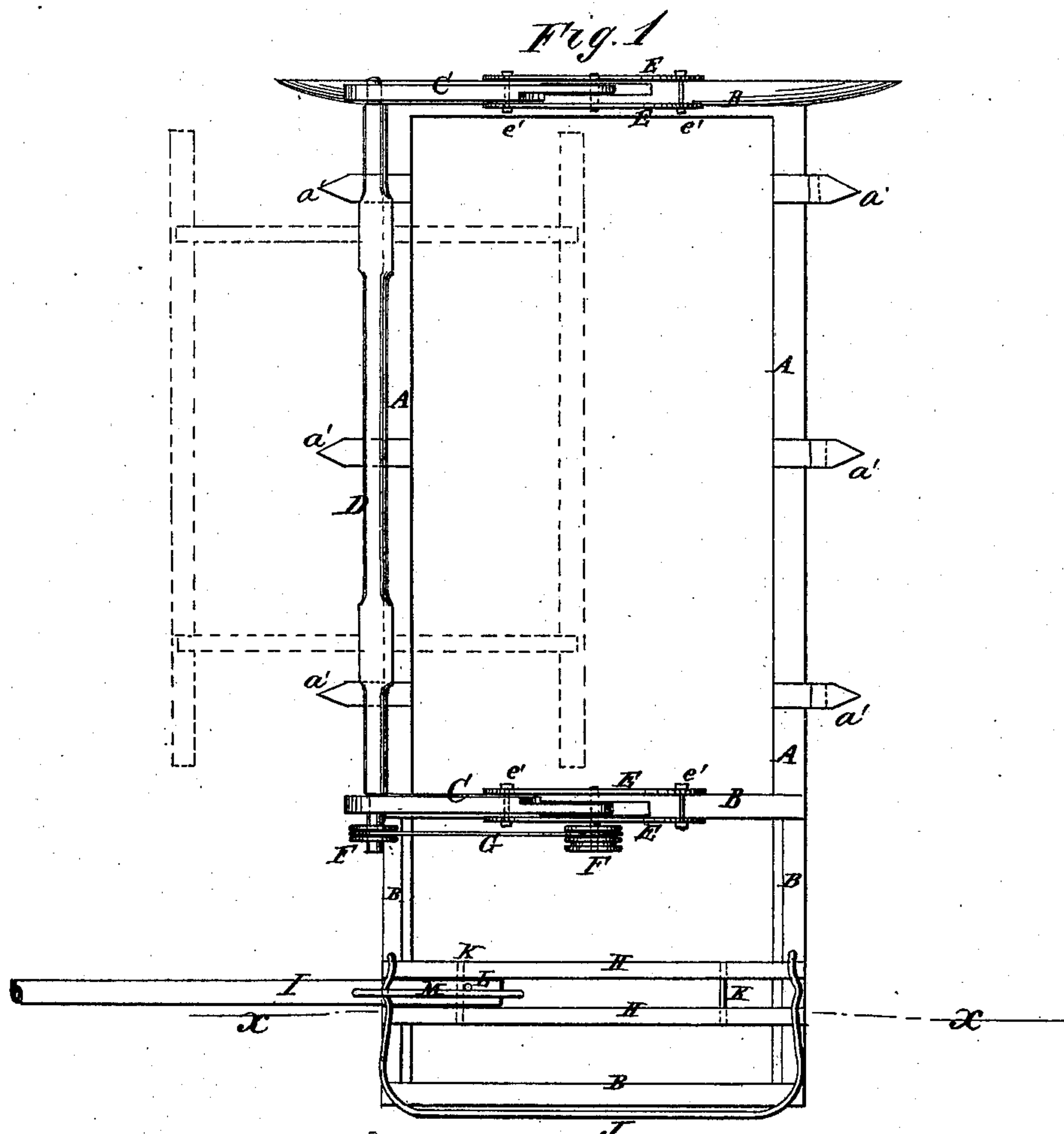


W. CLAWATER.  
REAPER AND HARVESTER.

No. 177,690.

Patented May 23, 1876.



WITNESSES:

*A. W. Amqvist*  
*John Goethals*

INVENTOR:

*W. Clawater*  
BY *Munn & Co.*

ATTORNEYS.

# UNITED STATES PATENT OFFICE.

WILLIAM CLAWATER, OF LIBERTY POLE, WISCONSIN.

## IMPROVEMENT IN REAPERS AND HARVESTERS.

Specification forming part of Letters Patent No. **177,690**, dated May 23, 1876; application filed March 6, 1876.

*To all whom it may concern:*

Be it known that I, WILLIAM CLAWATER, of Liberty Pole, in the county of Vernon and State of Wisconsin, have invented a new and useful Improvement in Reapers and Harvesters, of which the following is a specification:

Figure 1 is a top view of a portion of a reaper to which my improvement has been applied. Fig. 2 is a vertical section of the same, taken through the line *xx*, Fig. 1.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish reapers and harvesters which shall be so constructed that they may be used either side forward, so that they may be drawn across the field, making a right-hand cut, and drawn back, making a left hand cut, without detaching the horses.

The invention will first be described in connection with drawing, and then pointed out in the claims.

B represents the frame of the machine, to both sides of which are attached cutter-bars A, which are provided with fingers or guards *a'* and sickle-bars, in the usual way. C are two bars, to the outer ends of which is pivoted the reel shaft D. The inner ends of the bars C are pivoted in the central line of the platform-frame B, so that by turning the bars C the reel may be used with either cutter-bar. The bars C move between two semicircular bars, E, attached to the frame B, which keep the said bars C always in the same vertical plane, and which have holes formed through them to receive pins or bolts *e'*, to support the bars C and the reel at any desired elevation. To the pivot of the inner end of the bar C,

which is connected with the drive-wheel, and to the journal of the reel-shaft D are attached pulleys F, around which passes the band G, by which the reel is driven. By this arrangement the tension of the band G will not be changed by changing the reel from one side of the machine to the other. I is the tongue, the rear end of which is placed between two parallel bars, H, firmly attached to the frame B, to enable the said tongue to support the side draft. The rear end of the tongue I is slotted to receive a pin or bolt, K, attached to the said bars H, where it is secured in place by a pin, L, passed through said slotted end upon the other side of the said pins or bolts K. J is a guide-rod, the ends of which are attached to the frame B, and which is bent to pass around over the end of the said frame, and over which passes a loop, M, attached to the tongue I, so that by withdrawing the pin L the tongue I may be turned from one side to the other without detaching the horses.

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

1. The combination of frame B, bars C C E E, and a reel capable of being revolved to act over either of the two cutter-bars, substantially as shown and described.

2. The combination of the parallel bars H, the guide-rod J, and the loop M with the tongue I and the frame B, substantially as herein shown and described.

WILLIAM CLAWATER.

Witnesses:

H. D. WILLIAMS,  
K. PETERSON.