

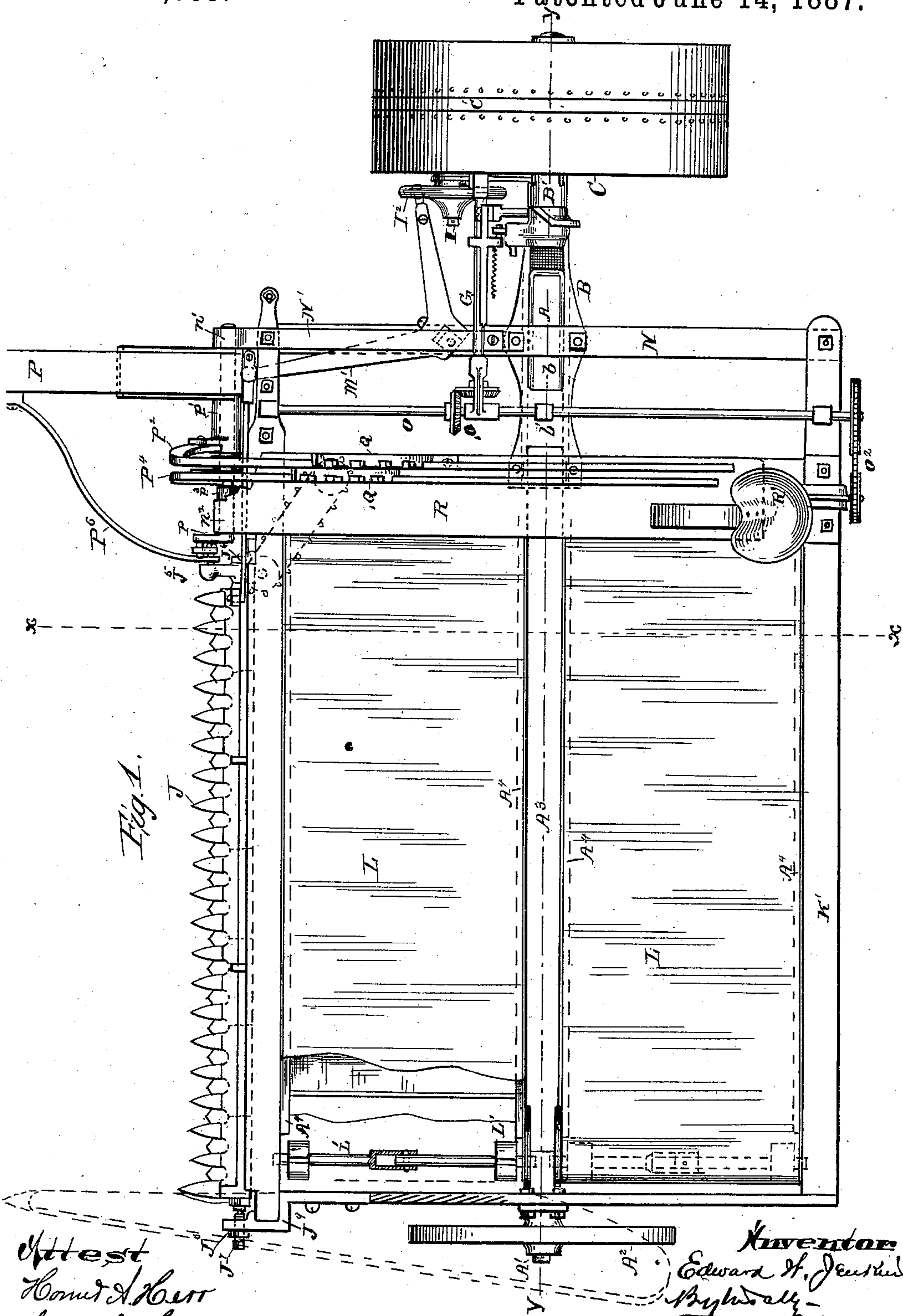
(No Model.)

4 Sheets—Sheet 1.

E. W. JENKINS.  
HARVESTING MACHINE.

No. 364,653.

Patented June 14, 1887.



Attest  
Conrad A. Kerr  
George C. Hummel

Inventor  
Edward W. Jenkins  
Physically

*[Signature]*

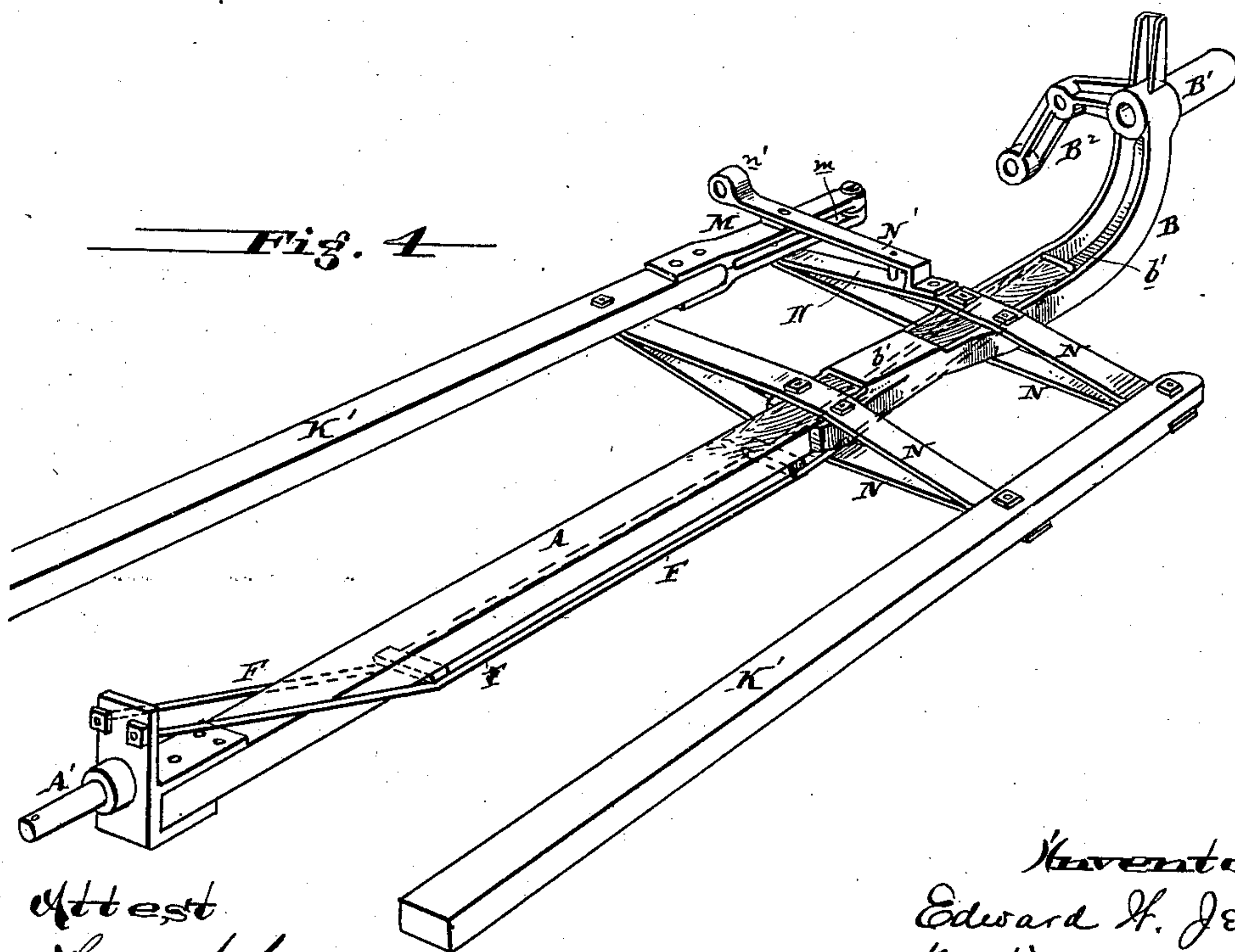
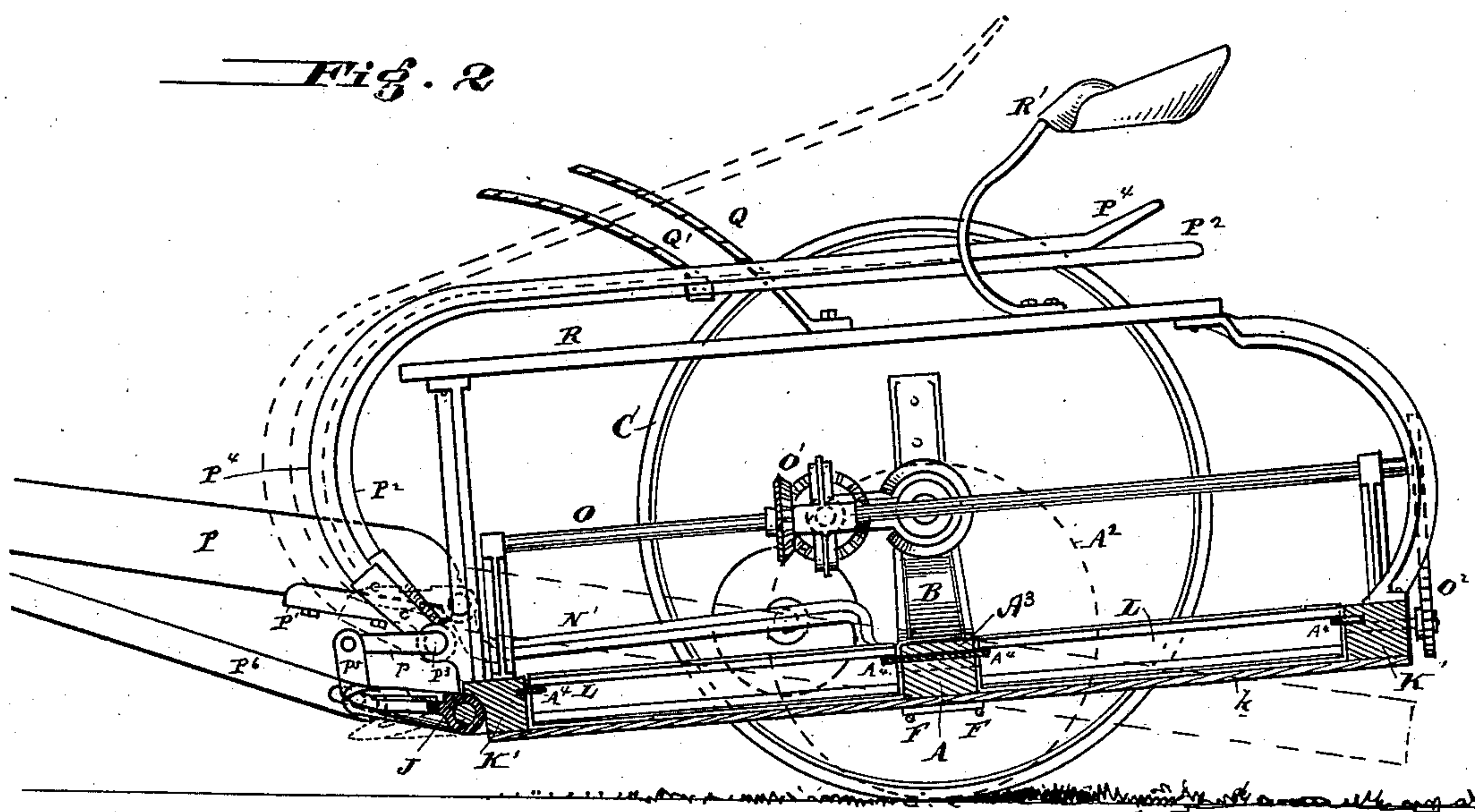
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4 Sheets—Sheet 2.

E. W. JENKINS.  
HARVESTING MACHINE.

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Patented June 14, 1887.



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*John H. Smith*



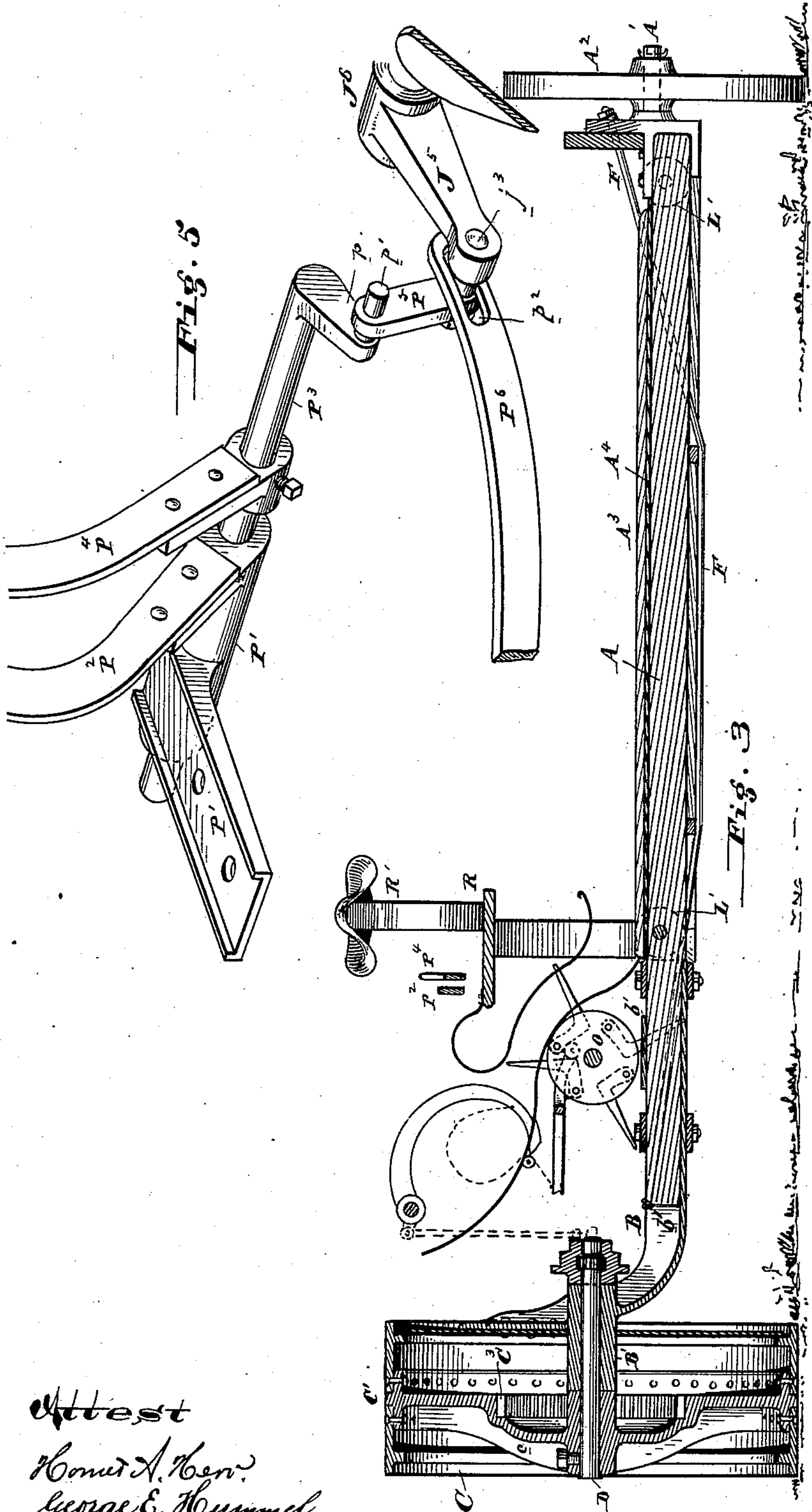
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4 Sheets—Sheet 3.

E. W. JENKINS.  
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Patented June 14, 1887.



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By his atty.

*[Signature]*

(No Model.)

4 Sheets—Sheet 4.

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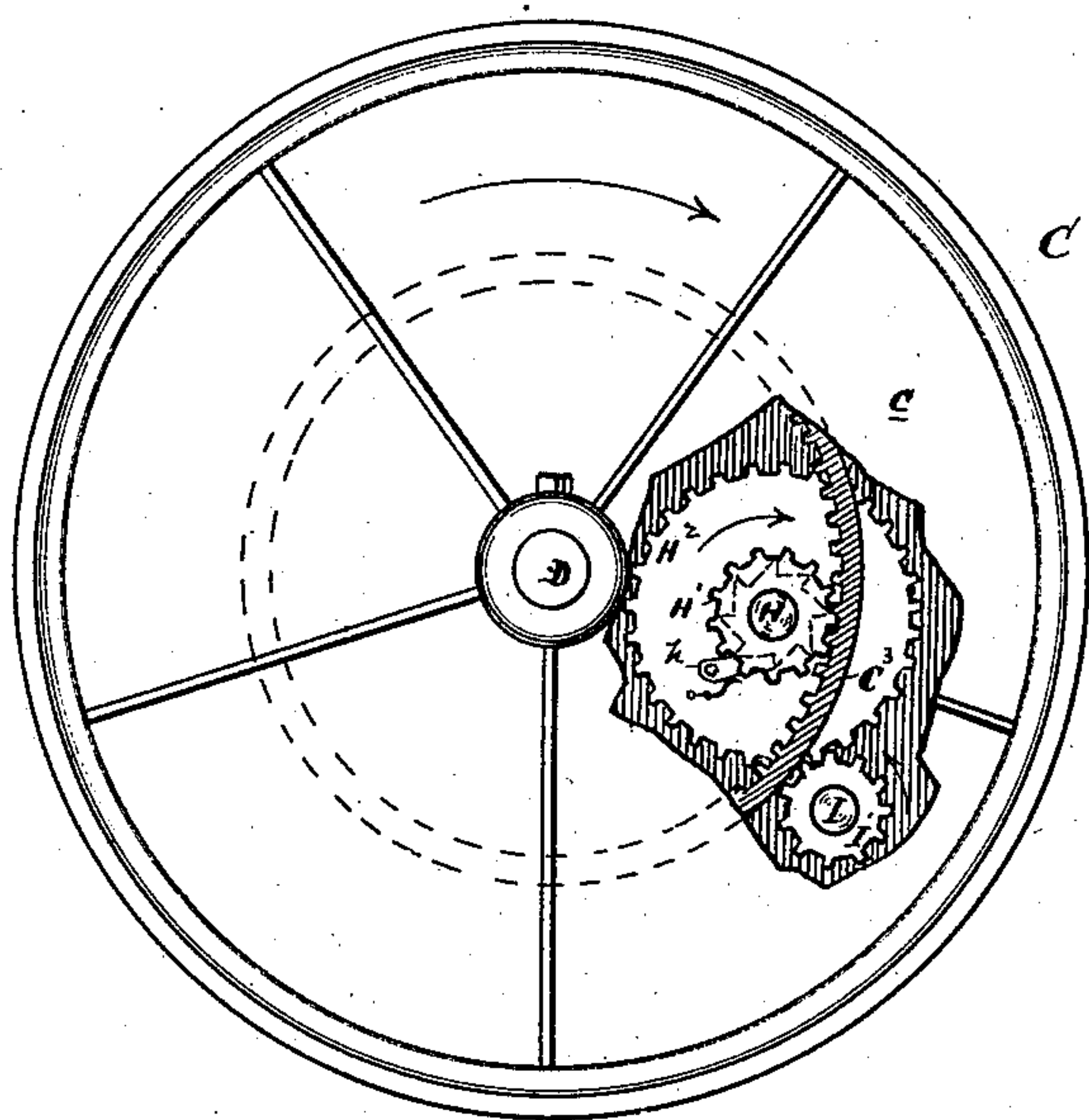


Fig. 6.

Attest

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George E. Hummel.

Inventor

Edward W. Jenkins  
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*W. H. Smith*



# UNITED STATES PATENT OFFICE.

EDWARD W. JENKINS, OF NORRISTOWN, PENNSYLVANIA.

## HARVESTING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 364,653, dated June 14, 1887.

Application filed July 23, 1884. Serial No. 138,518. (No model.)

*To all whom it may concern:*

Be it known that I, EDWARD W. JENKINS, of Norristown, Montgomery county, and State of Pennsylvania, have invented an Improvement in Harvesting-Machines, of which the following is a specification.

My invention has reference to harvesting-machines; and it consists in certain improvements, fully set forth in the following specification and shown in the accompanying drawings, which form part thereof.

The object of my invention is to provide a harvesting-machine with a pivoted hinged finger-bar adapted to be adjusted at any angle desired with the ground, and means whereby its angle with the platform will be automatically changed as the platform is tilted, so that it will always maintain the same angle with the ground, no matter how much the angle of the platform may be varied; further, to so form the machine that the platform is strengthened by a longitudinal girder extending entirely across it and through the middle to prevent sagging; further, to support said girder upon the grain and traction wheels, whereby the platform and all appendages may be tipped to any angle desired, or the machine may be readily turned or allowed to run easily over the ground, being well adapted to accommodate itself to all conditions of the earth, the mechanism for accomplishing which objects being described in detail hereinafter.

In the drawings, Figure 1 is a plan view of a harvesting-machine embodying my improvements. Fig. 2 is a cross-section of same on line *x x*. Fig. 3 is a longitudinal section of same on line *y y*. Fig. 4 is a skeleton perspective view of the girder and framing. Fig. 5 is a perspective view of the mechanism for adjusting the finger-bar. Fig. 6 is an elevation of the outside of the traction-wheel, with part broken away.

A is the longitudinal girder which extends across the machine, and to which the platform and other appendages of the machine are secured. The outer end of said girder is provided with a journal, *A'*, to which the grain-wheel *A<sup>2</sup>* is journaled, and upon its inner end it is secured to the crank-shaped metal support B, made socket-shaped, as at *b'*, into which the end of the wooden girder A is placed and securely held by bolts. This girder A may be

made of wood or metal, the former being preferred, and, if desired, may be braced by truss-rods F. The inner end of support B is provided with bearing *B'* and bracket *B<sup>2</sup>*. The shaft and axle D of the traction-wheel C is journaled in said bearing *B'*, whereby said girder A and support B extend from wheel to wheel and connect them together, allowing the machine to be tipped or turned readily.

Secured across the support B and girder A are the truss-bars N N, to the outer ends of which are secured the timbers *K' K'*, between which the platform is located. The bottom between the timbers *K' K'* may be closed by boards *k*. Between the girder A and each timber *K'* the endless aprons L L are located. These aprons are driven and supported by rollers *L'*. Between the rollers *L'* the aprons are guided upon rails *A<sup>4</sup>*, the center one of which is preferably made of a metal plate held down upon the girder A by a strip of wood, *A<sup>3</sup>*. If desired, the girder A might be placed below the platform and a single apron extend across the full breadth of the platform.

The traction-wheel C is formed of a central rim, *C'*, secured to a disk, *c*, fixed to the hub which is secured to axle D. This disk carries the internal gear, *C<sup>3</sup>*.

The gearing for driving the cutter-bar may be constructed as follows: A shaft, G, is journaled in the bracket *B<sup>2</sup>*, and carries loosely upon its stubble end a pinion, *H'*, which meshes with the internal gear, *C<sup>3</sup>*, within the traction-wheel, and is provided with a ratchet-and-pawl device, *h*, the pawl of which is pivoted to a spur-wheel, *H<sup>2</sup>*, secured fast to shaft G, and this spur-wheel meshes with a pinion, *I'*, secured to a shaft, I, journaled in the bracket *B<sup>2</sup>* and carrying upon its outer end the crank-wheel *I<sup>2</sup>*, which actuates the cutter-bar by means of a bell-crank lever, *M'*, working on a universal joint between the bars N and *N'*, the forward end of said lever working in a horizontal slot, *m*, in the casting M, secured to one end of the front timber, *K'*. The shaft G rotates a shaft, O, by gearing *O'*, and said shaft O actuates the endless aprons L by the chain and sprocket wheels *O<sup>2</sup>*.

R is the seat-plank supported over the inner end of the platform, and *R'* is the driver's seat.

The finger-bar J is pivoted to the platform



at  $J^6 J^7$ . The pivot  $J^6$  is provided with a crank-arm,  $J^5$ , and the pivot  $J^7$  is held in place in the bracket  $J^9$  by a nut,  $J^8$ .

Journalled at  $n'$  and  $n^2$  is a rock-shaft,  $P^3$ , having on one end a crank,  $p$ , provided with a crank-pin,  $p'$ , to which a link,  $P^5$ , is hinged, the lower end of which is connected to the pin  $j^3$  on the crank  $J^5$  of the finger-bar. (See Fig. 5.) Secured to this shaft  $P^3$  is a lever,  $P^1$ . Loosely journalled on shaft  $P^3$  is a sleeve,  $P'$ , to which a lever,  $P^2$ , and the pole  $P$  are secured. A brace,  $P^6$ , connects the pole  $P$  also with pin  $j^3$  on crank  $P^5$  by a slot,  $p^2$ , through which the pin passes.

The levers  $P^2 P^1$  extend up over the seat-plank  $R$  to within reach of the driver, and the position of lever  $P^2$  may be regulated and held there by rack-segment  $Q$ , secured to the seat-plank  $R$ ; but lever  $P^1$  can only be regulated to lever  $P^2$ , being secured in position by a segment,  $Q'$ , carried by lever  $P^2$ . By moving the lever  $P^1$  the angle of the finger-bar with respect to the ground may be adjusted, and it will always retain such angle, no matter to what extent the lever  $P^2$  may be moved to rock the platform up or down, changing its angle. Thus if the finger-bar be adjusted horizontally it will always remain horizontal, no matter how many changes may be given to the angle of the platform. This construction of pivoted finger-bar allows of the platform being pivoted in a line with its center, as there is no possibility of running the fingers or teeth into the ground, and the depth of cut is made practically unlimited and the knives made to cut level.

No reeling mechanism has been shown or described, as any of the devices now in use may be used with this machine.

While I prefer the construction shown, I do not limit myself to the details thereof, as they may be modified in various ways without departing from my invention.

In this application I do not claim the binding mechanism herein shown, for this forms the subject-matter of my application No. 173,947, filed August 10, 1885. Neither do I claim the specific construction of the traction-wheel, the specific conveyer-aprons, nor the contractible rollers, all therein shown.

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

1. In a harvesting-machine, the combination, with the traction-wheel, its axle, and the platform having a central supporting bar or girder, of a crank-shaped support secured at its lower end to the girder and provided at its upper end with a bearing in which the said axle is journalled, and two endless conveyer-aprons located on the platform and one on each side of the supporting bar or girder, substantially as and for the purpose specified.

2. In a harvesting-machine, the combination, with the traction-wheel, its axle, and the box-shaped platform, of a girder extending through the middle of the platform and divid-

ing the platform into two parts, a crank-shaped supporting-bar secured at its lower end to the girder and provided at its upper end with a bearing, in which said axle is journalled, and two endless conveyer-aprons, one in each of said box-shaped divisions of the platform, substantially as and for the purpose specified.

3. In a harvesting-machine, the combination, with the traction-wheel, its axle, and the platform, of a girder extending through the middle of the platform, a crank-shaped supporting-bar secured at its lower end to said girder and provided at its upper end with a bearing, in which said axle is journalled, the depending arm  $B^2$ , formed on the crank-shaped supporting-bar, and gearing for driving the cutter-bar carried by said arm and driven by said traction-wheel, substantially as and for the purpose specified.

4. In a harvesting-machine, the combination of the platform, the brace-bars  $N$ , a central girder provided with an axle at one end for the grain-wheel, a supporting-bar having an axle-bearing at the other end and supporting the stubble end of the girder, and a grain-wheel and a traction-wheel, substantially as and for the purpose specified.

5. In a harvesting-machine, the combination of the platform with a central wooden girder,  $A$ , provided with an axle at its outer end for the grain-wheel, the crank-shaped metal supporting-bar having a socket, into which the end of the girder fits, and provided with an axle-bearing for the traction-wheel, the brace-bars  $N$ , the stringers  $K'$ , and the platform carried by said stringers and girder, substantially as and for the purpose specified.

6. In a harvesting-machine, a pivoted platform and means, substantially as shown, to tilt it, in combination with a pivoted or hinged finger-bar, lever mechanism to tilt the finger-bar independently of the platform, and connecting devices between the means for tilting the platform and the finger-bar, whereby the angle that the finger-bar makes with the platform may be changed without changing the angle of the platform with the ground, but in which any change in the angle of the platform with the ground also changes the angle of the finger-bar with the platform, substantially as and for the purpose specified.

7. In a harvesting-machine, a platform and a pole hinged thereto, in combination with a lever and rack device to adjust the angle of the pole with respect to the platform, a pivoted or hinged finger-bar, and lever and rack devices for adjusting the angle of the said finger-bar, the rack last mentioned being carried by the lever first mentioned, substantially as and for the purpose specified.

8. The combination of central girder,  $A$ , front and rear beams  $K'$ , crank-shaped support  $B$ , and truss-bars  $N$ , substantially as and for the purpose specified.

9. The combination of central girder,  $A$ , front and rear beams  $K'$ , crank-shaped support  $B$ , and truss-bars  $N$ , with two endless



aprons, L, and their supporting-rollers, substantially as and for the purpose specified.

10. In a harvester-platform, the central support or girder, A, and front and rear beams, 5 in combination with endless aprons L, located one on each side of said girder, and rollers for said aprons, having bearings in said central girder and front and rear beams, substantially as and for the purpose specified.

10 11. In a harvester, the combination of the wheels, the central support or girder, A, supported at each end upon a wheel, and endless aprons L, located one on each side of said girder, and rollers for said aprons, having bearings in

said central girder and front and rear beams, 15 substantially as and for the purpose specified.

12. The combination of the pivoted finger-bar, crank J<sup>5</sup>, link P<sup>5</sup>, crank p, rock-shaft P<sup>3</sup>, sleeve P', tongue P, levers P<sup>2</sup> P<sup>4</sup>, and racks Q Q', substantially as and for the purpose specified. 20

In testimony of which invention I hereunto set my hand.

EDWARD W. JENKINS.

Witnesses:

R. M. HUNTER,  
WILLIAM C. MAYNE.