

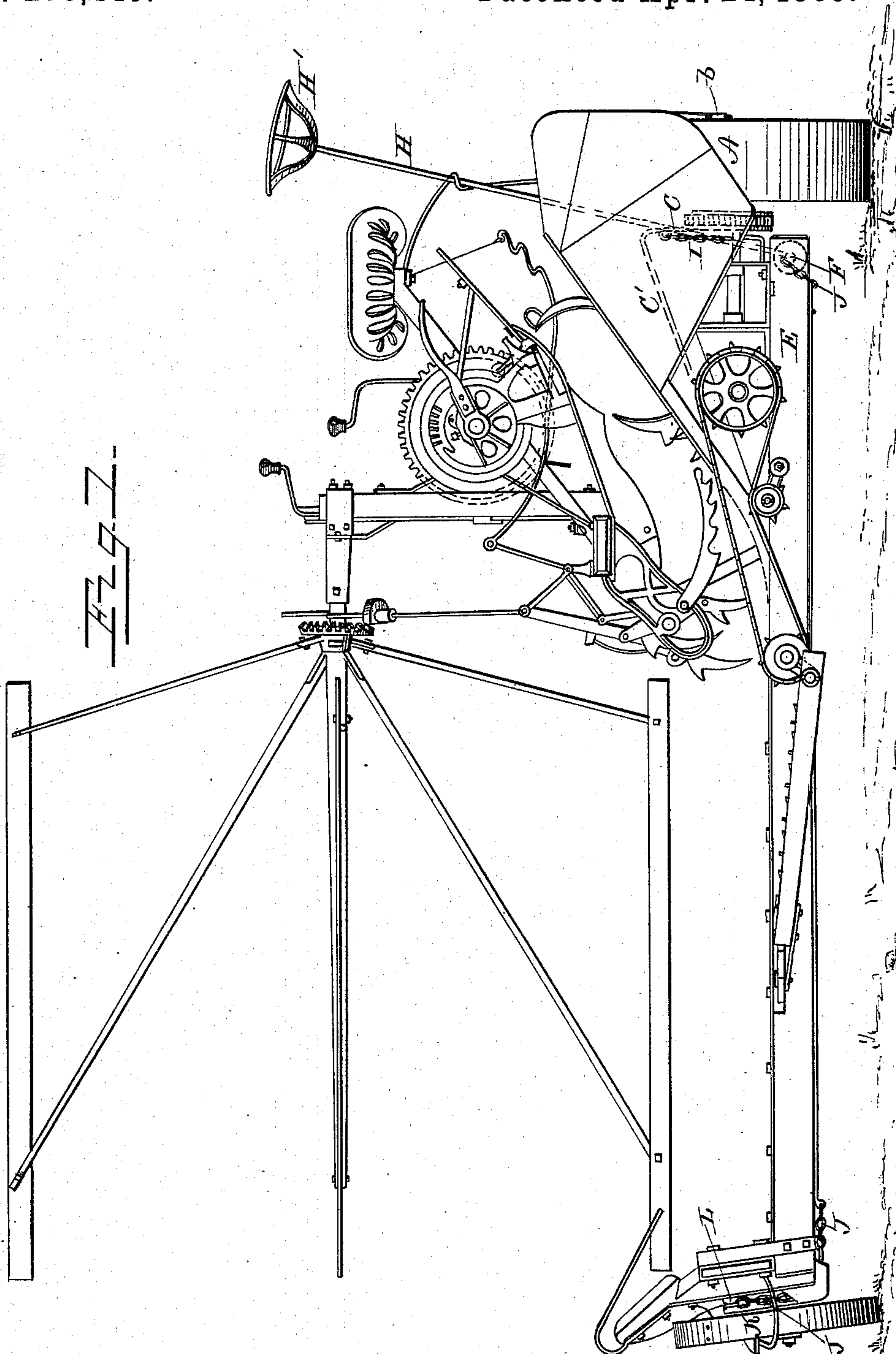
(No Model.)

3 Sheets—Sheet 1.

L. MILLER.
HARVESTER.

No. 276,449.

Patented Apr. 24, 1883.



Witnesses,
Frank L. Ouraud
R. M. Smith.

Inventor,
Lewis Miller,
by A. M. Smith
Attorney.

(No Model.)

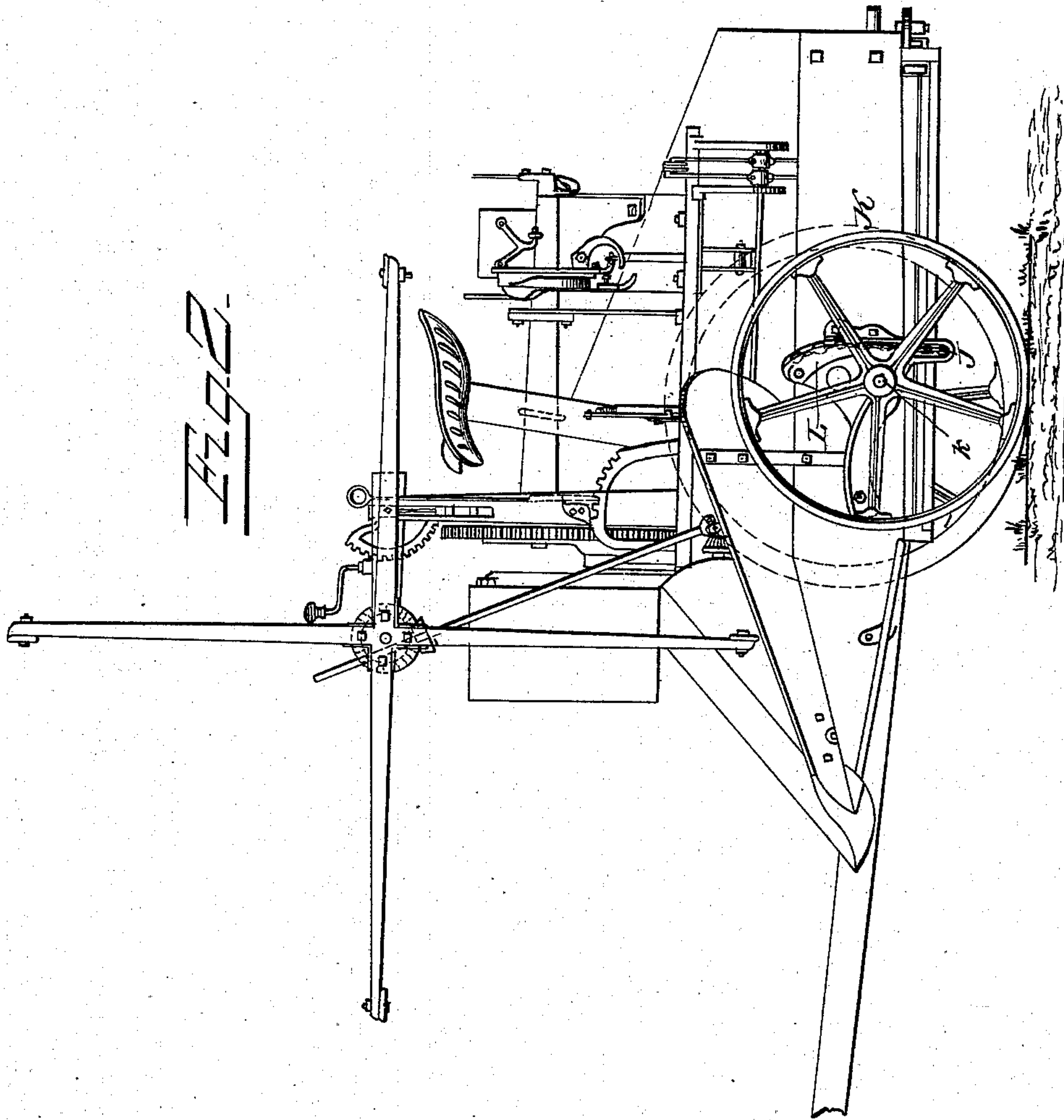
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Attorney

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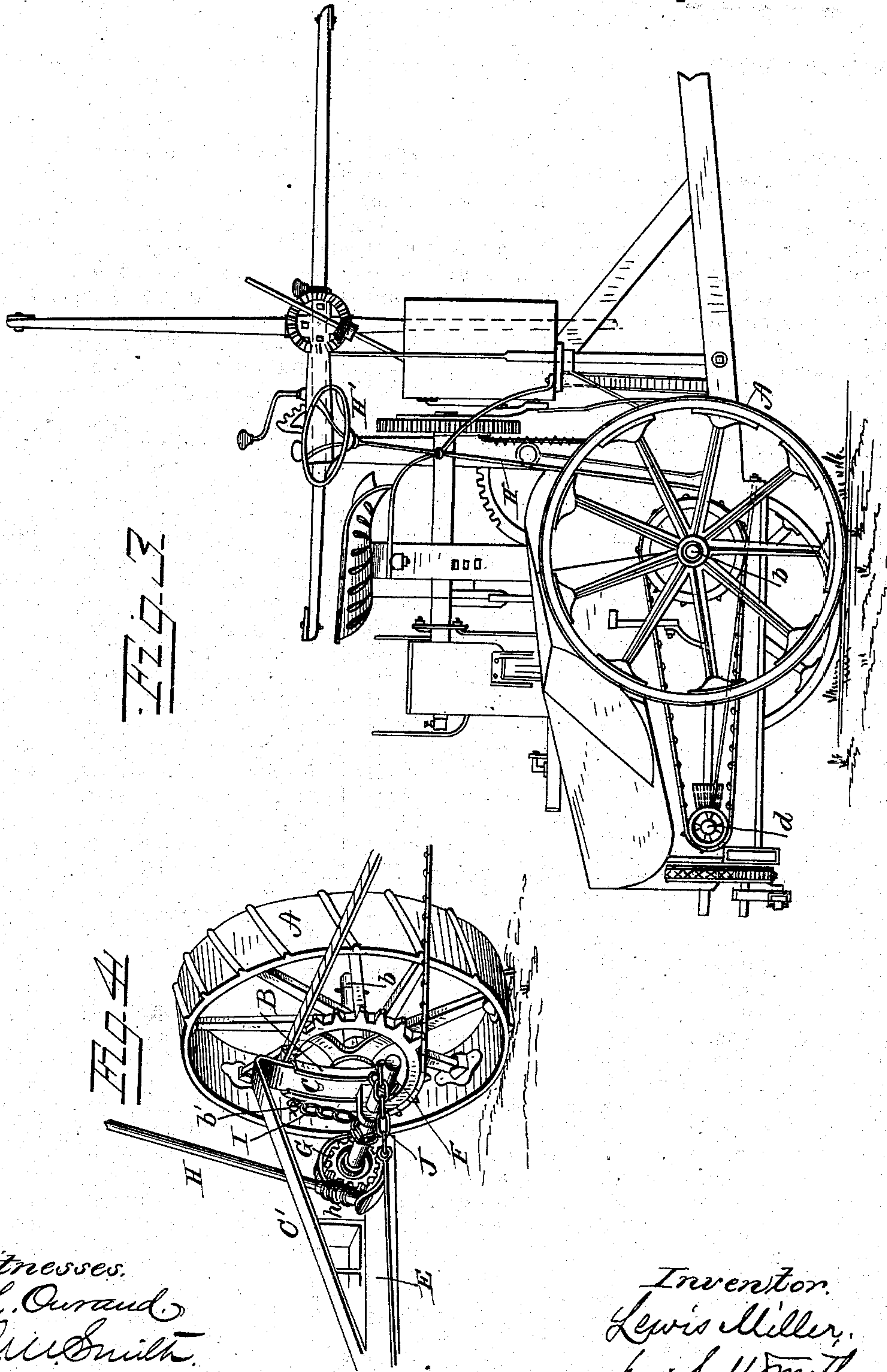
3. Sheets—Sheet 3.

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No. 276,449.

Patented Apr. 24, 1883.



Witnesses:
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UNITED STATES PATENT OFFICE.

LEWIS MILLER, OF AKRON, OHIO.

HARVESTER.

SPECIFICATION forming part of Letters Patent No. 276,449, dated April 24, 1883.

Application filed September 8, 1882. (No model.)

To all whom it may concern:

Be it known that I, LEWIS MILLER, of Akron, county of Summit, and State of Ohio, have invented new and useful Improvements in Harvesters, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 represents a rear elevation of a reaping-machine with my improvements applied. Fig. 2 is a side elevation of the same, taken from the stubble side. Fig. 3 is a similar elevation taken from the grain side; and Fig. 4 is a perspective view of a portion of the machine, looking from a point on the inner side of and behind the driving-wheel, showing said wheel, the manner of its attachment to the frame, and the means in part for effecting the adjustment of the latter.

The machine represented in the drawings is similar, in the construction of the main and platform frames, and in the arrangement of its reeling, cutting, raking, binding, and bundle-discharging mechanisms, to that described in other applications filed by me, and will not therefore be described in detail herein, further than is necessary to an understanding of the improvements herein claimed, and which relate to the particular connection between the main or binder frame and the driving-wheel, and to the means for effecting the adjustment of said frame and its attachments on the driving and grain wheels, as will be explained.

In the accompanying drawings, A represents the driving-wheel, mounted upon a stud-axle, *b*, formed upon or rigidly secured at its inner end to a sleeve or grooved block, B, connected to and adapted to slide upon a pendent arm, C, of the binder-frame.

The construction and arrangement of this binder-frame are fully described in another application referred to, one of its inclined transverse bars, C', having the pendent arm C formed upon it for the attachment of the driving-wheel.

This pendent arm in the present construction is curved in the arc of a circle of which the secondary or bevel-wheel shaft *d* is the center, and the sleeve or groove in the axle-block B being curved to conform to the curvature of the arm C, it follows that under any adjustment of the axle relatively to the frame the relation of the driving-wheel to said secondary

shaft for actuating it remains always the same, whatever may be the height of the main or binder frame.

A sprocket-wheel is shown secured to the inner side of the wheel A, from which motion is imparted, through an endless chain and a sprocket-wheel on the secondary shaft *d*, to the latter for driving it and the several mechanisms connected therewith; but other means may be employed for connecting the secondary shaft with and actuating it from the driving-wheel, if preferred, the construction of the pendent arm C and adjustable axle-block serving to hold said parts always in proper working relation to each other.

In suitable bearings on the inner face of the pendent arm C, or in the inner ends of the transverse bars E, which are extended under and secured to the binder-frame in a manner described in another application referred to, is mounted a longitudinal shaft, F, provided on its forward end with a worm-wheel, G.

H is an upright shaft, stepped at its lower end in a suitable bearing attached to the transverse bar E, and provided with a worm or screw at *h*, which engages with the worm-wheel G for actuating it and the shaft F. The shaft H extends upward through an eye-bearing attached to the driver's foot-board or seat-support, either or both, as described in another application referred to, and is provided on its upper end with a crank or hand wheel, H', arranged within convenient reach of the driver, in his seat on the machine, for enabling him to operate said shaft.

The shaft F has one end of a chain, I, attached to and wrapping it, the other end of said chain extending up to and being connected with an eye or hook, *b*, formed in or attached to the axle-block B, at or near its upper end.

By operating the shaft H, and through it the shaft F, for winding the chain upon the latter, said shaft F, with the binder-frame, in which it has its bearings, will be drawn upward, the arm C moving in the grooved block B until the desired height of adjustment of the frame at its inner end is obtained, while by rotating the shaft H in a reverse direction the weight of the frame serves to unwind the chain I, allowing the frame to descend as required.

By the employment of what is termed a

“slow worm” for actuating the worm-wheel G, the latter, with its shaft, will remain in any position in which it may be left, holding the frame at any desired adjustment without the aid of any separate retaining device, said form of screw or worm also giving greater ease of adjustment.

The grain-wheel K is connected by a stud-axle, *k*, with a quadrant lever or arm, L, pivoted at its forward end to the outer face of the divider, or outer end of the platform-frame, and a chain, J, extending from the upper end of the curved face of the quadrant L, down through a groove therein, and underneath a guiding-roller on the lower face of the platform-frame, at its outer end, and thence transversely underneath said frame, and is connected with the shaft F in such a manner as to be wrapped thereon when said shaft is rotated for wrapping the chain I upon it, and to unwind therefrom when the chain I is unwound. By this arrangement the outer end of the platform-frame is adjusted simultaneously with and to the same extent as the inner end, thus preserving the parallel relation of the platform to the ground, and by the same devices which, as above explained, serve to hold the platform at any desired height without the aid of extraneous locking devices.

Parts of the machine not herein particularly described or claimed may be constructed and arranged as described in another application referred to, or in any usual or preferred manner.

Having now described my improvements, what I claim as new in this application is—

1. The inclined transverse bar of the binder-frame, provided with a pendent arm curved in an arc of a circle of which the secondary or bevel-wheel shaft *d* is the center, in combination with the grooved block to which the main drive-wheel axle is secured, made adjustable thereon, substantially as and for the purpose described.

2. The combination, with the curved arm of the binder-frame, and the axle-block adjustable thereon, of the shaft F, chain I, worm-wheel G, and shaft H, with its worm or screw for adjusting said frame on the driving-wheel, substantially as described.

3. The combination, with the shaft F and the worm-wheel and worm or screw for actuating the same, of the adjustable axle-block B, and the adjustable quadrant-lever L, carrying the grain-wheel axle, said block and quadrant being connected with the shaft F by chains I and J, adapting them to be simultaneously adjusted relatively to the main binder and platform frames, substantially as described.

In testimony whereof I have hereunto set my hand this 5th day of September, A. D. 1882.

LEWIS MILLER.

Witnesses:

N. N. LEOHUE,

N. A. MEANS.