

Harvesters.

No. 141,597.

Patented August 5, 1873.

Fig. 1.

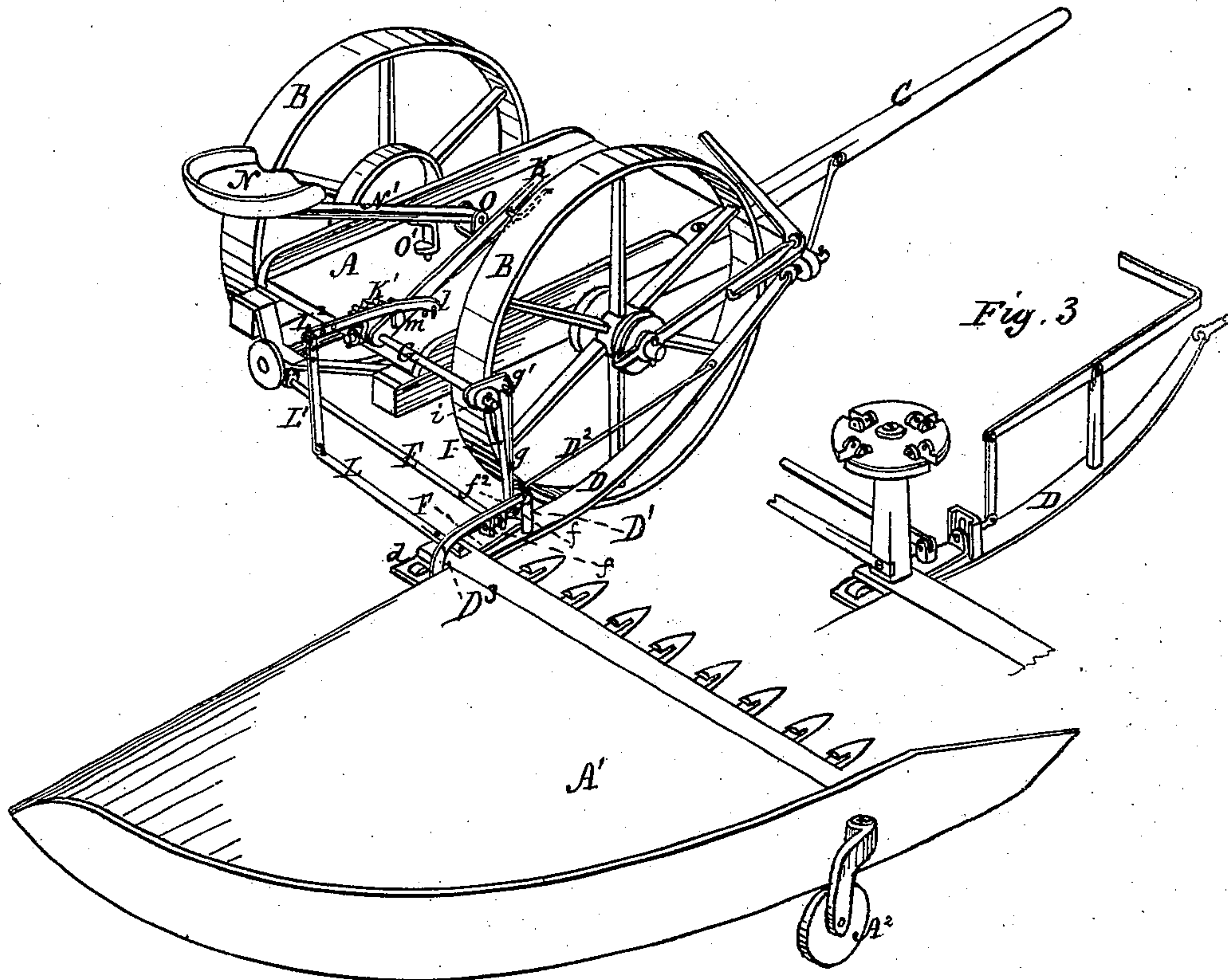
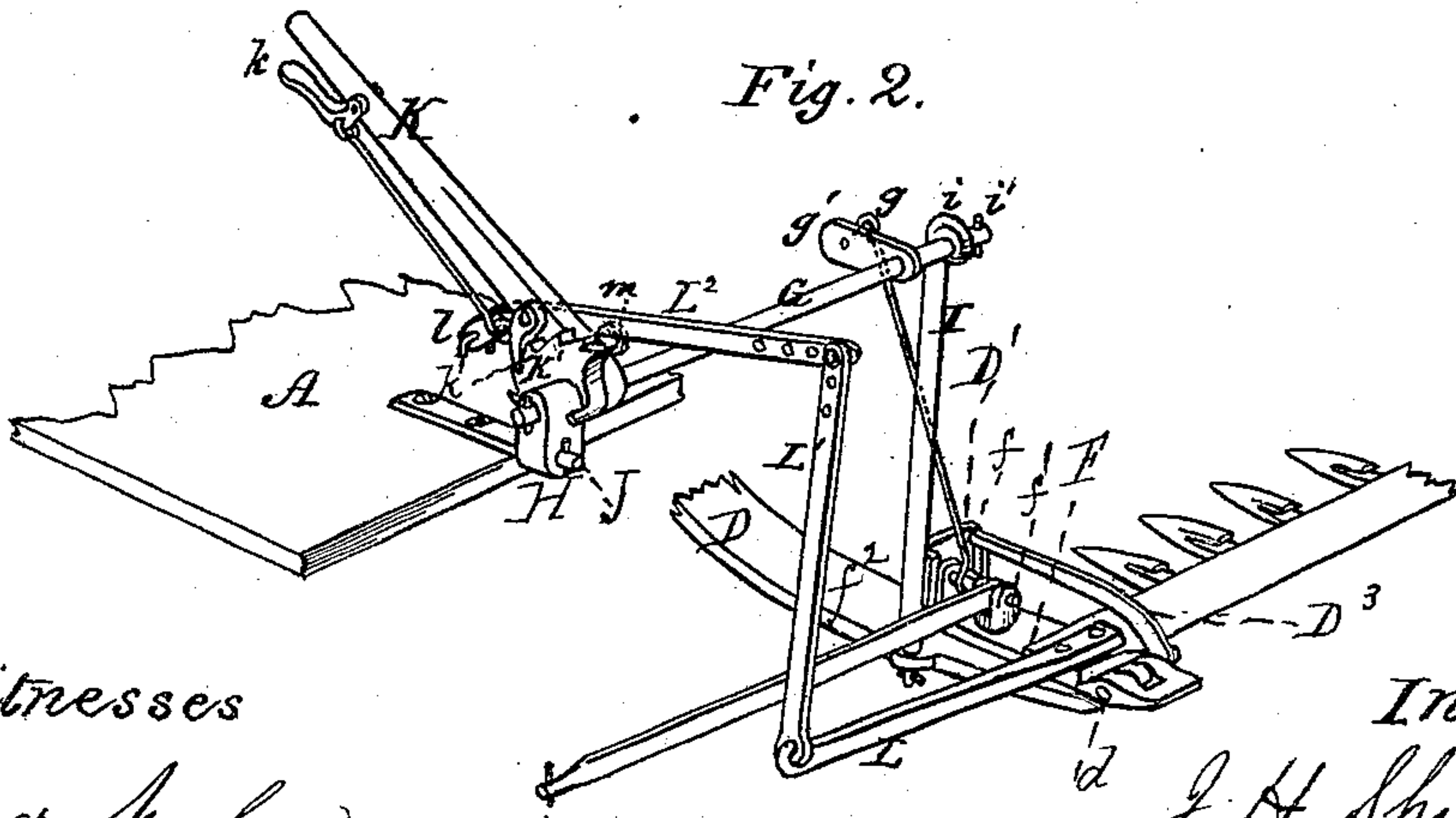


Fig. 2.



Witnesses

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JOSEPH H. SHIREMAN, OF YORK, PENNSYLVANIA, ASSIGNOR OF ONE-HALF HIS RIGHT TO ADAM R. REESE, OF PHILLIPSBURG, NEW JERSEY.

IMPROVEMENT IN HARVESTERS.

Specification forming part of Letters Patent No. 141,597, dated August 5, 1873; application filed November 23, 1872.

To all whom it may concern:

Be it known that I, JOSEPH H. SHIREMAN, of York, county of York and State of Pennsylvania, have invented a new and useful Improvement in Harvesting-Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings making a part of this specification, in which—

Figure 1 is a perspective view of my improved machine taken from the rear grain-side. Fig. 2 is a similar view of the lifting devices, showing, also, their connection with the frame and cutting apparatus taken from the rear stubble-side of the machine; and Fig. 3 represents a modification of the devices for tilting the platform.

Similar letters of reference denote corresponding parts in both figures.

In operating reaping-machines having a hinged cutting apparatus and a grain-platform, the outer end of which is supported upon a grain-wheel, it is frequently found desirable to rock or tilt the platform while the machine is at work, for the purpose of either elevating or depressing the cutters. In the ordinary construction of reapers where this capability exists, particularly in those having a rear cut, the centers about which the platform oscillates or rocks are not coincident with each other, the axle of the grain-wheel being farther in rear of the line of cutters than is the hinge or pivot which connects the inner end of the platform to its support, the result of which is that the outer end of the cutting apparatus moves in an arc of a circle of greater diameter than that described by the inner end of the said cutting apparatus, and hence its parallelism with the surface of the ground is destroyed. In order to overcome this difficulty I have made this invention, which consists in combining with the grain-platform an arm-link or clamp and lever for adjusting its inner or stubble side, and for simultaneously rocking or tilting it upon its center of vibration, while at the same time preserving the horizontal position of the finger-bar, or its parallel relation to the surface of the ground, as hereinafter described.

In the drawings, A represents the main frame;

A¹, the platform; and A², the grain or carrying wheel; B, the driving-wheels; C, the pole; D, the drag-bar; and E, the hinged brace-bar, all of the usual or desired construction. F is the inner shoe, pivoted at its heel end, at *d*, to the drag-bar D, and provided at its forward end with a vertical flange or toe piece, *f*, fitting and working up and down within a vertical groove in the rear face of a vertical standard, D¹, formed upon or bolted to the drag-bar D. D² is a stay-rod extending from the upper end of the standard D¹ to a point near the front end of the drag-bar D. D³ is a similar rod or link connecting the upper end of the standard D¹ with the heel-end of the drag-bar. The rear end of the link D³ may be attached to the heel of the drag-bar, or to the pivot of the hinge, and the front end of said link should be connected to the standard by means of a screw-nut, so that the link can be drawn up tight, and thus, in connection with link D², be made to serve as a cord or girt to stiffen and support the drag-bar, as will be readily understood. The shoe F has mounted upon it, near its forward end, a forked standard or lug, *f*¹, to which the outer end of brace-bar E is pivoted, the inner or main frame end of said brace E being connected with the said frame in any usual manner. The toe piece or vertical flange *f*, at the forward end of shoe E, has projecting from its rear vertical face a pin or stud, *f*², to which the lower end of a link, *g*, is connected for rocking or raising and depressing the forward end of the shoe, the upper end of said link being connected with a crank-arm, *g*¹, formed on rock-shaft G mounted in a pivotal block, H, on the main frame at its inner end, and at its outer end in an eye or loop bearing, *i*, at the upper end of a standard or support, I, applied to the drag-bar at or near the forward end of the shoe. The loop or eye *i* is enlarged, to permit the necessary freedom of movement of the rock-shaft G required to accommodate it to the movements of the drag-bar and platform. A pin, *i*¹, prevents the rock-shaft from escaping from the bearing *i*. If preferred, a universal-joint bearing may be substituted for the enlarged loop-bearing *i*. The pivot-block H, in which the inner end of the rock-shaft G has its

bearings, is mounted on a longitudinal pivot, J, on the main frame, and permits the outer end of the rock-shaft to rise and fall, to accommodate the movements of the platform and also permit said shaft to be used as a lever for raising the platform through the standard connection I. K is a lifting-lever mounted upon and keyed or otherwise firmly fastened to lever rock-shaft G for operating the same, and provided with a thumb-latch lever and latch or pawl kk' ; and K^1 is a toothed sector for locking said lever at any desired point of adjustment. L is an arm or rod bolted to the inner end of the finger-bar or platform, and L^1 , a vertical link connecting the inner end of said arm with the rear end of an arm, L^2 , which, at its forward end, is pivoted to the main frame at a point, l , in advance of the rock-shaft G, said arm passing over the rock-shaft and over a grooved fulcrum-pulley, m , on the side of the lifting-lever K. The operation of the lifting devices will be readily understood.

When the parts are in the position shown in the drawings the cutter-bar is parallel with the surface of the ground. If now I rock or tilt the platform by simply vibrating the shoe F about its hinge-pivot d , the outer end of the cutter-bar oscillating about the axle of the carrying-wheel A^2 will rise and fall faster than the heel-end of said bar, which oscillates about the pivot d .

In order to compensate for this inequality in the motion the inner side of the platform may be raised or lowered by means of arm L, lever L^2 , and link L^1 , and for convenience in operation I so connect said lever L^2 with the lever K, which operates the shoe F, that the platform may be both tilted and raised or lowered (as the case may be) by the use of the single hand-lever K.

N is the driver's seat mounted on an inclined standard, N' , which, at its lower end, is connected by a horizontal pivot with a vertical swiveling standard or socket piece, O. This socket piece is at the upper end of a vertical shaft, which is mounted in suitable bearings in the frame A. In rear of pivot-block O, or between said block and the driver's seat, is a bracket or support, O' , for the standard N' , bolted or otherwise firmly secured to said standard, and, resting at its foot on the main frame-platform, serves to uphold the seat and pivoted seat-support in the required position. The foot of the bracket O' is armed with a pin or spur, which enters one of a series of perforations in the frame or frame platform.

By this arrangement the seat-support may be turned around from rear to front, turning with its pivot-block O, or supported in inter-

mediate points to relieve the horses of the weight of the cutting apparatus by the counterpoise weight of the driver, or for other purposes, a pivotal connection of the seat with its standard N' permitting the seat to be turned upon said standard to accommodate the position of the standard.

In Fig. 3 I have represented a modification of the device employed for tilting the platform, in which the standard P is mounted on the drag-bar at some distance in front of the shoe F with a lever, Q, extending to the front of the frame within convenient reach of the driver, and provided with suitable locking device, in which case any desired form of lifting-lever may be employed for lifting arm L, or the inner side of the grain-platform. R in this figure represents the rake-standard upon which I design to mount a revolving rake, preferably of the Johnston class.

It is evident that in that class of machines in which the front end of the drag-bar may be raised and lowered at will the hinged shoe F may be dispensed with, as the bar L, or its equivalent support, may be made to serve as the inner pivot, and the platform can be rocked upon such pivot by means of the drag-bar, as will be readily understood.

In the drawings I have shown both the lever L^2 , which lifts the inner side of the platform, and the rock-shaft G, as being connected with the hand-lever K in such manner as to be operated thereby, and I regard this as the preferable construction.

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

1. In a harvesting-machine having a hinged grain-platform, which is free to rise and fall at its outer end independently of the main frame, and which is supported at its outer or grain side by carrying-wheels, a lever connected with the platform, substantially as described, for enabling the operator to simultaneously lift the inner or stubble side of the platform, and to rock or tilt it upon the outer carrying or grain wheel.

2. In combination with the drag-bar D the rear brace D^3 connecting the standard D^1 with the heel-end of the drag-bar, substantially as and for the purpose described.

3. The pivoted seat-support N' , in combination with the swivel-block O for adjusting the seat, substantially as described.

In testimony whereof I have hereunto set my hand this 20th day of November, A. D. 1872.

JOSEPH H. SHIREMAN.

Witnesses:

ALEX. MAHON,

H. H. DOUBLEDAY.