

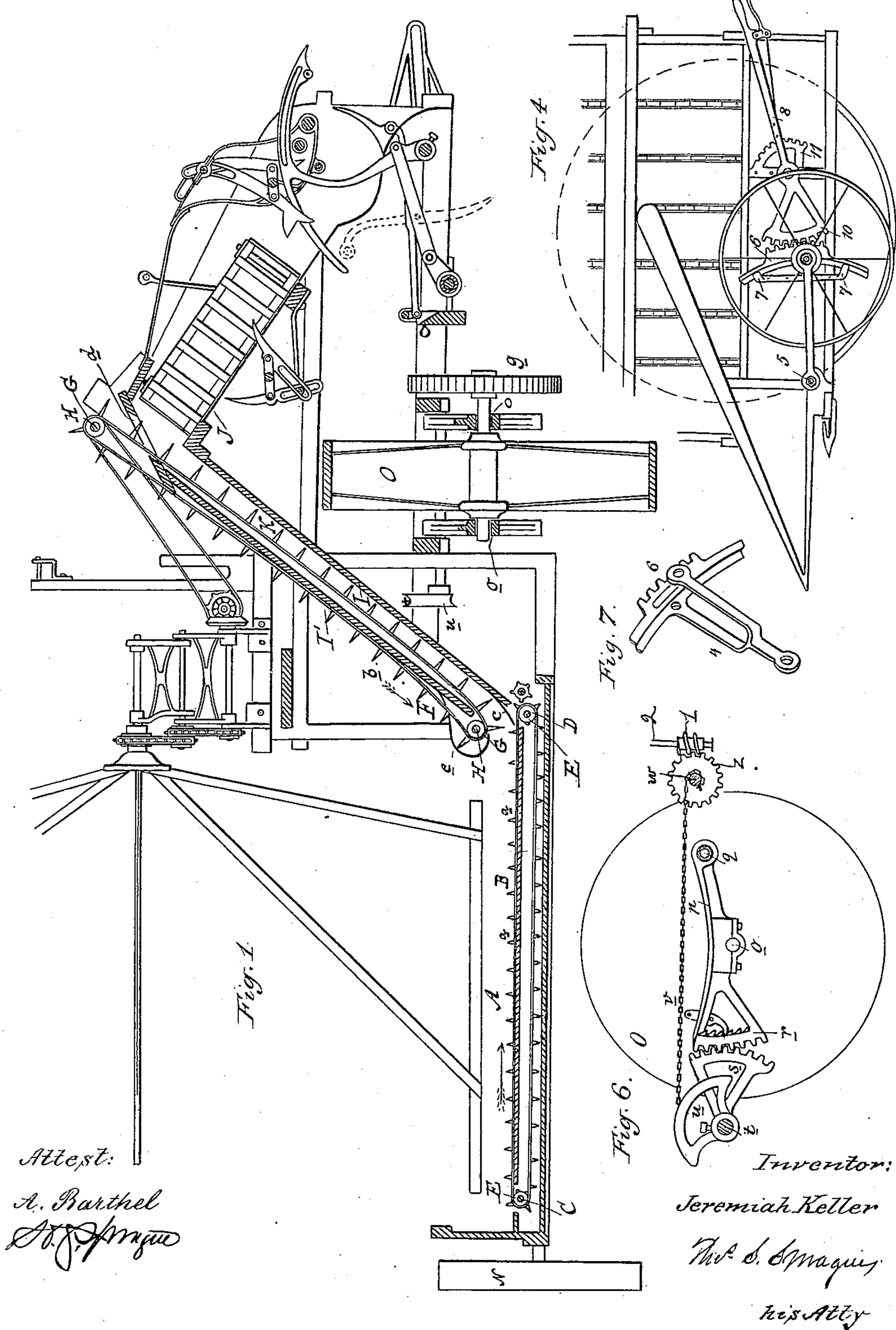
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3 Sheets—Sheet 1.

J. KELLER.
HARVESTER.

No. 330,713.

Patented Nov. 17, 1885.



(No Model.)

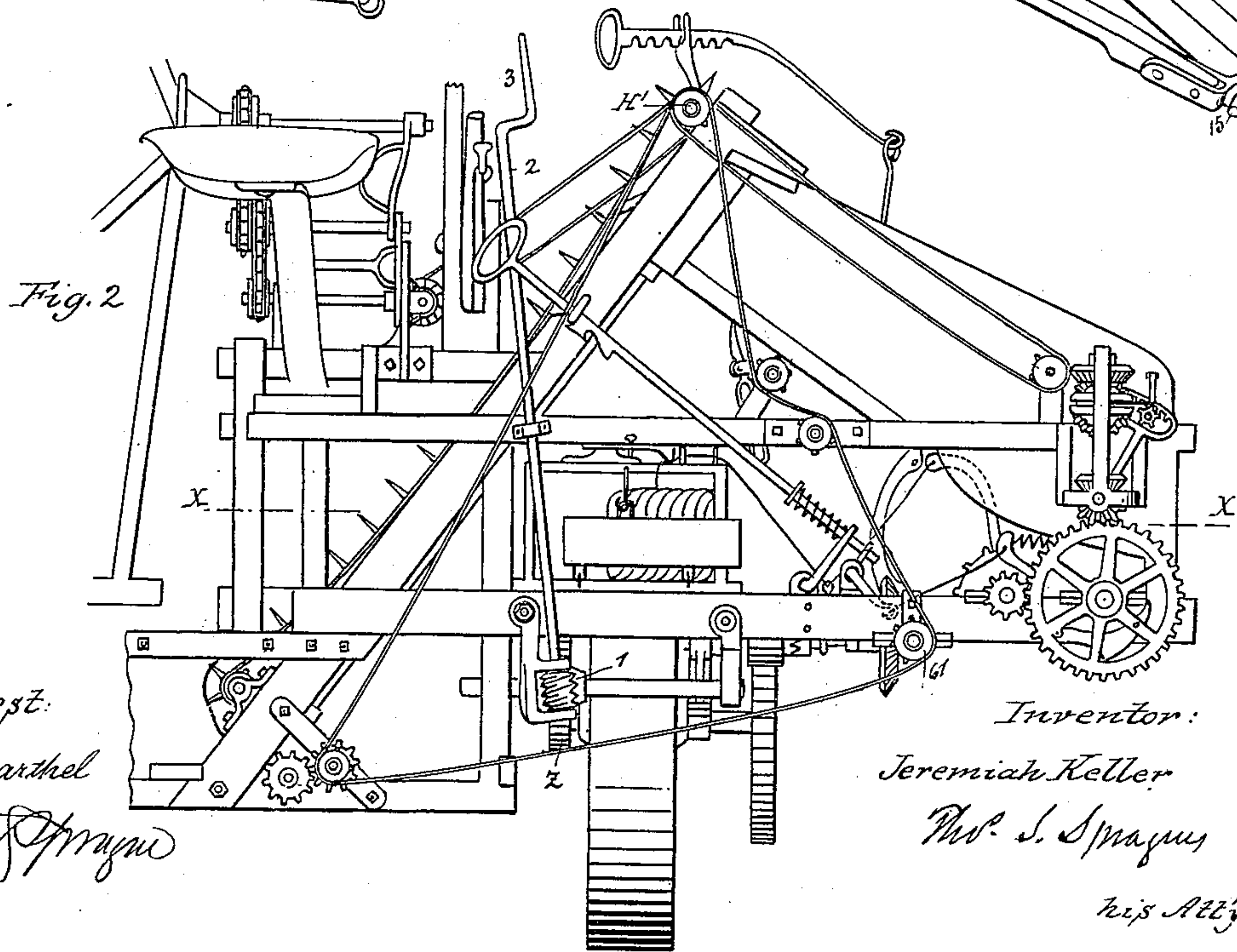
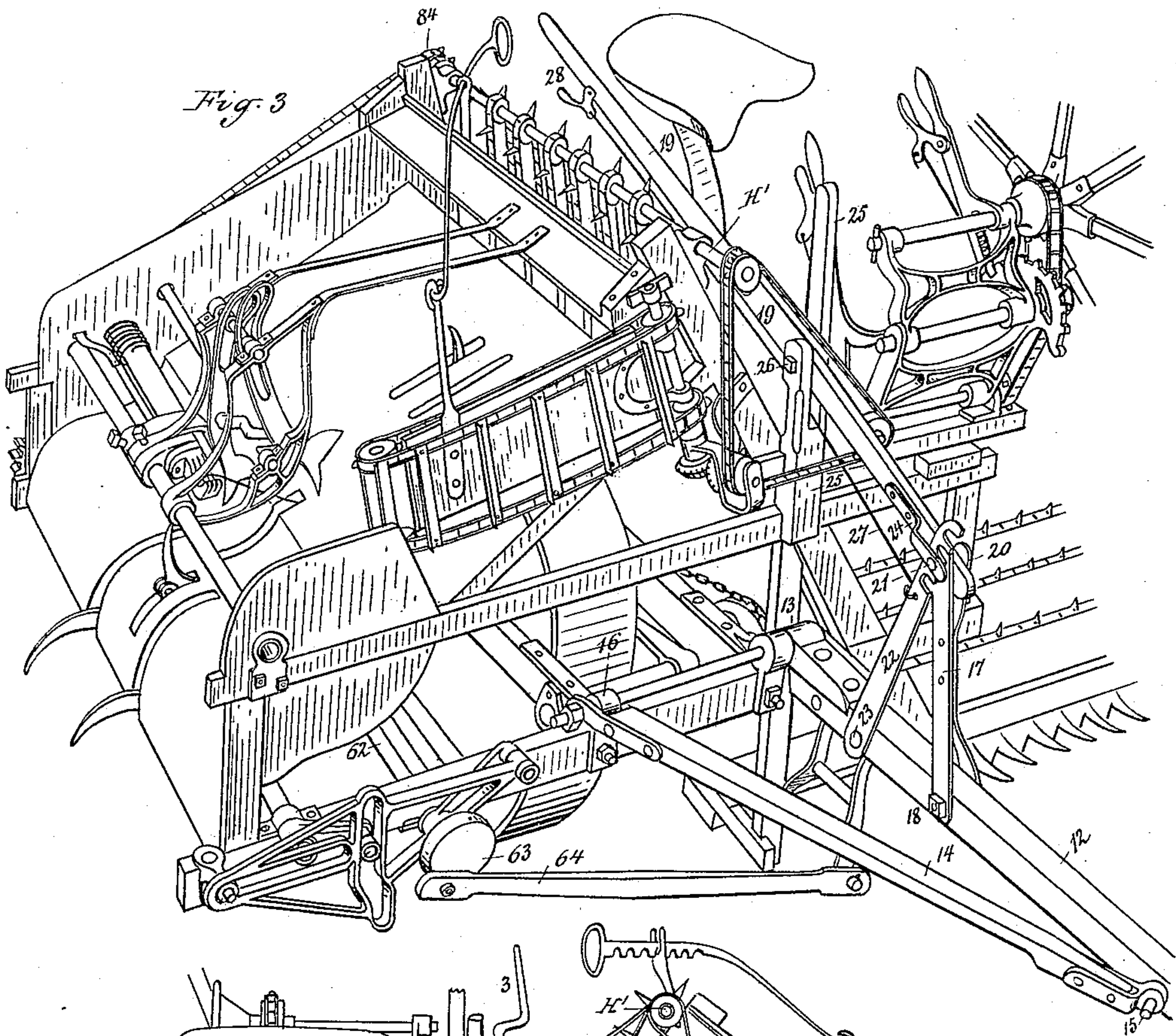
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Attest:

A. Barthel

W. Sprague

Inventor:

Jeremiah Keller

Wm. S. Sprague

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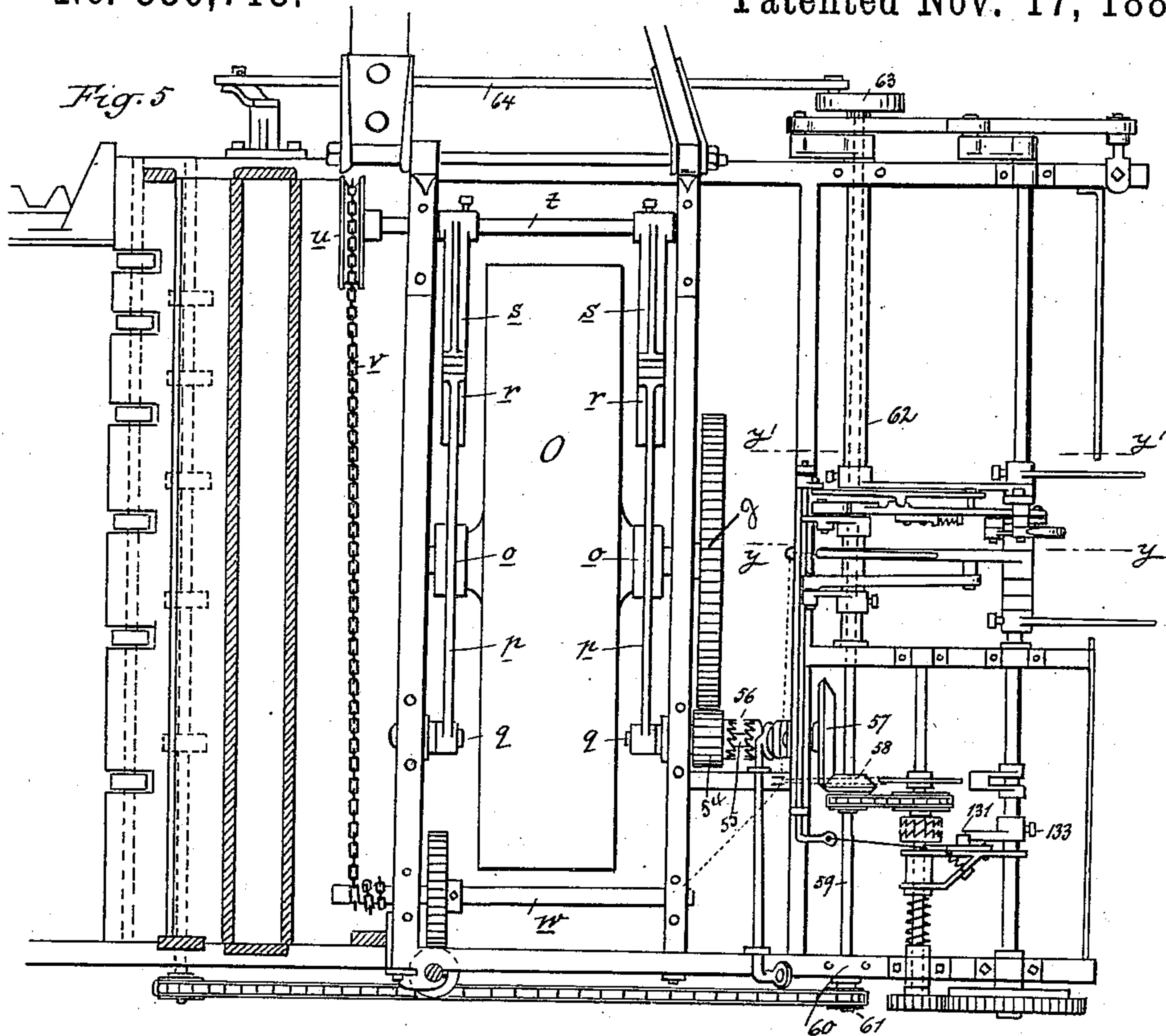
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UNITED STATES PATENT OFFICE.

JEREMIAH KELLER, OF SANDUSKY, OHIO, ASSIGNOR TO OTTO KROMER, OF
SAME PLACE.

HARVESTER.

SPECIFICATION forming part of Letters Patent No. 330,713, dated November 17, 1885.

Application filed November 28, 1883. Serial No. 113,023. (No model.)

To all whom it may concern:

Be it known that I, JEREMIAH KELLER, of Sandusky, in the county of Erie and State of Ohio, have invented new and useful Improvements in Harvesters; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form a part of this specification.

10 This invention relates to an improvement in harvesters; and the improvement consists in the construction and arrangement of the different parts, all as hereinafter described, and pointed out in the claims.

15 In the drawings which accompany this specification, Figure 1 is a vertical section of my machine through the axis of the drive-wheel. Fig. 2 is a rear elevation of my machine. Fig. 3 is a perspective view of the front of the machine, showing the tongue and its connections. Fig. 4 is an elevation of the grain end of the platform with the grain-wheel. Fig. 5 is a horizontal section on line X X in Fig. 2. Fig. 6 is a side elevation of the main drive-wheel, showing the devices by means of which the binder is raised or lowered from or to the ground. Fig. 7 is a detached perspective view of the forked lever by means of which the grain-wheel is adjustably secured to the grain-
30 platform.

In Fig. 1, A is the grain-platform; B, a number of endless chains arranged laterally across the platform. C and D are shafts journaled in proper bearings near the outer and inner ends of the grain-platform, and provided with sprocket-wheels E E, over which the endless chains B are carried. The endless chains B are provided with spurs or rake-teeth *a*, which carry the cut grain, which is deposited upon the grain-platform, toward the inner end of the same. F indicates other endless chains, likewise provided with spurs *b*; G, sprocket-wheels secured upon shafts H H, and carrying the endless chains F. I and I' are two parallel inclined floors. The bottom floor, I, connects at its lower end with the inner end of the grain-platform by a curved portion, *c*, the lower edge of which is provided with slots, as usual, (not shown,) to allow the endless chains B to pass through. The upper end of the inclined floor I is joined to the binding-

platform J. The inclined floor I' is arranged some distance above and parallel to the floor I, and forms between it and the latter an inclined passage, K, through which the grain that is delivered by the endless chains B at the inner end of the grain-platform is carried up by the spurs *b* through the action of the endless chains F and delivered upon the binding-platform J. *d* is a combing or stripping board secured at the upper end of the floor I', and *e* is a guard secured to the lower end of the same. Both are slotted, as usual, to allow the chains F to pass, and while the former prevents any grain from being carried up beyond the binding-platform J, the latter protects the lower spur-wheels from getting entangled with grain, and also guides the grain into the passage K. N is the grain-wheel, and O is the main drive-wheel.

The devices for raising or lowering the machine from or to the ground are as follows: As seen in Fig. 1, the frame of the machine is supported upon the drive-wheel O, which is keyed upon the shaft. This latter is journaled upon each side of the wheel in boxes *o*, which are formed upon the levers *p*, as shown in Figs. 5 and 6, the former figure showing the levers *p* in plan, the latter in elevation. These levers are pivoted at their rear ends, *q*, to the frame of the machine, and carry upon their forward ends geared segments *r*, which mesh into the geared segments *s*, secured upon a shaft, *t*, forward of the drive-wheel. The shaft *t* is journaled to the frame of the machine, and carries fast upon one end the grooved segment *u*, to which is secured one end of the chain *v*. The other end of this chain is secured near the rear of the machine to a shaft, *w*, which is journaled to the frame, and has keyed upon it a gear-wheel, *z*. The gear-wheel *z* engages with a worm-wheel, 1, secured upon the upright shaft 2, which is secured to the rear end of the frame, as shown in Fig. 2, and terminates at its upper end in a crank, 3, which comes within convenient reach of the driver from his seat, and enables the latter thereby, by turning this crank in one direction or another, to either raise or lower his machine; and the advantages of the device just described are that the machine is thereby easily lifted.

The machine is also provided with devices

for raising or lowering the grain end of the platform by adjusting the grain-wheel independently of the main wheel, and these devices are shown in Figs. 4 and 7, which latter shows one of the parts detached. N is the grain-wheel, journaled in the forked ends of a lever, 4, which is pivotally secured at 5 to the outer face of the grain-divider. 6 is a segment-gear secured to the free end of the inner fork of the lever 4. 7 7 are lugs which hold the segment-gear 6 against the side of the harvester-frame. 8 is a hand-lever pivoted at 9 to the harvester-frame and carrying upon its forward end a segment-gear, 10, which engages with the segment-gear 6. 11 is a notched quadrant secured to the frame of the machine, by means of which and a locking-pawl the lever 8 is locked in position. It is obvious that by actuating the lever 8 in the proper manner the grain-wheel can be raised or lowered at will, thereby raising or lowering the platform in the same degree.

The devices for tilting the machine for the proper operation of the harvester are shown in Fig. 3, where 12 is the pole to which the draft is applied in the usual way. It is hinged at 13 to the frame of the machine. 14 is a sway-bar pivotally secured at 15 to the pole and at 16 to the frame of the machine. 17 is a bar or link forked upon both of its ends, the lower fork embracing the pole and pivotally secured thereto at 18. The upper fork embraces one end of the lever 19, and is pivotally secured thereto at 20 by a bolt, 21. 22 is a notched brace, pivotally secured at 23 to the pole and engaging with one of its notches upon the bolt 21, between the pivotal point 20 and the strap 24, which forms a keeper, between which and the lever 19 the brace 22 may freely pass. 25 is a post secured at its lower end to the frame and forming at 26 a fulcrum for the lever 19. 27 is a rod secured at one end to the brace 22 and at the other end to a bell-crank hand-piece, 28, which is pivotally secured near the handle end of lever 19. The lever 19 can be conveniently operated by the driver from his seat, and by withdrawing the notched bar 22 from its engagement with the bolt 21, by properly pressing upon the free end of the hand-piece 28, the driver is at liberty to tilt the machine to any degree, locking it then in its adjusted position by allowing the brace 22 to re-engage with the bolt 21.

In Fig. 1 is shown the gear-wheel *g*, which, as before described, is secured upon the shaft of the drive-wheel O. This gear-wheel *g* meshes with a pinion, 54, loosely sleeved upon the shaft 55, journaled in proper bearings in the frame of the machine. 56 is a clutch, splined upon the shaft 55, and which, when closed, transmits the motion from the pinion 54 to the bevel gear-wheel 57, which meshes with another bevel-gear, 58, keyed upon the shaft 59. The shaft 59 is journaled in

bearings at 60 to the frame of the machine, and is provided upon its rear end with a sprocket-wheel, 61, by means of which the platform and elevator-belts are driven. It passes through the hollow shaft, 62, by which it is also supported, and bears upon its opposite end the crank-wheel 63, to which the pitman 64 is secured, and operates the cutter-bar of the harvester.

I am aware of the Patent No. 162,929, in which a U-shaped vibrating frame surrounds the main drive-wheel and has bearings for the axle of the same, and make no claim to such construction as forming part of my invention. This construction requires that the arms be long and extend beyond the wheel, whereas by my construction I can use a short lever, thus making a more compact arrangement, as I can bring the segments within the circumference of the wheel, and also lessen the weight and cost of the machine.

What I claim as my invention is—

1. In a harvester, the combination, with the main drive-wheel, the levers *p*, having boxes *o*, and pivoted to the frame of the machine, one upon either side of said wheel, and each carrying a geared segment, *r*, of the shaft *t*, journaled in the frame adjacent to said wheel, geared segments *s*, secured upon said shaft and meshing one with each of the segments *r* upon either side of said wheel within the circumference thereof, and means for operating said shaft, substantially as and for the purposes specified.

2. In a harvester, the combination, with the drive-wheel O and independent pivoted levers *p*, carrying boxes *o*, in which said wheel is journaled, and the geared segments *r r*, also carried by said levers, of the shaft *t*, journaled in the frame of the machine forward of the drive-wheel, geared segments *s s*, secured upon said shaft and meshing with the segments *r*, one upon either side of said wheel, grooved quadrant *u*, also secured to said shaft, chain *v*, shaft *w*, gear-wheel *z*, carried thereby, worm *l*, and its shaft, all combined and operating substantially as and for the purposes described.

3. The device for adjusting the grain-wheel, consisting of the pivoted forked lever 4, carrying the gear-segment 6, in combination with the hand-lever 8, having the gear-segment and locking devices secured to the frame, all combined and operating substantially as and for the purposes described.

4. In combination with the main frame and hinged pole of the harvester, the bar 17, lever 19, notch-brace 22, pin 21, and pull-rod 27, all combined and operating substantially as and for the purposes described.

JEREMIAH KELLER.

Witnesses:

H. S. SPRAGUE,
E. SCULLY.