

(No Model.)

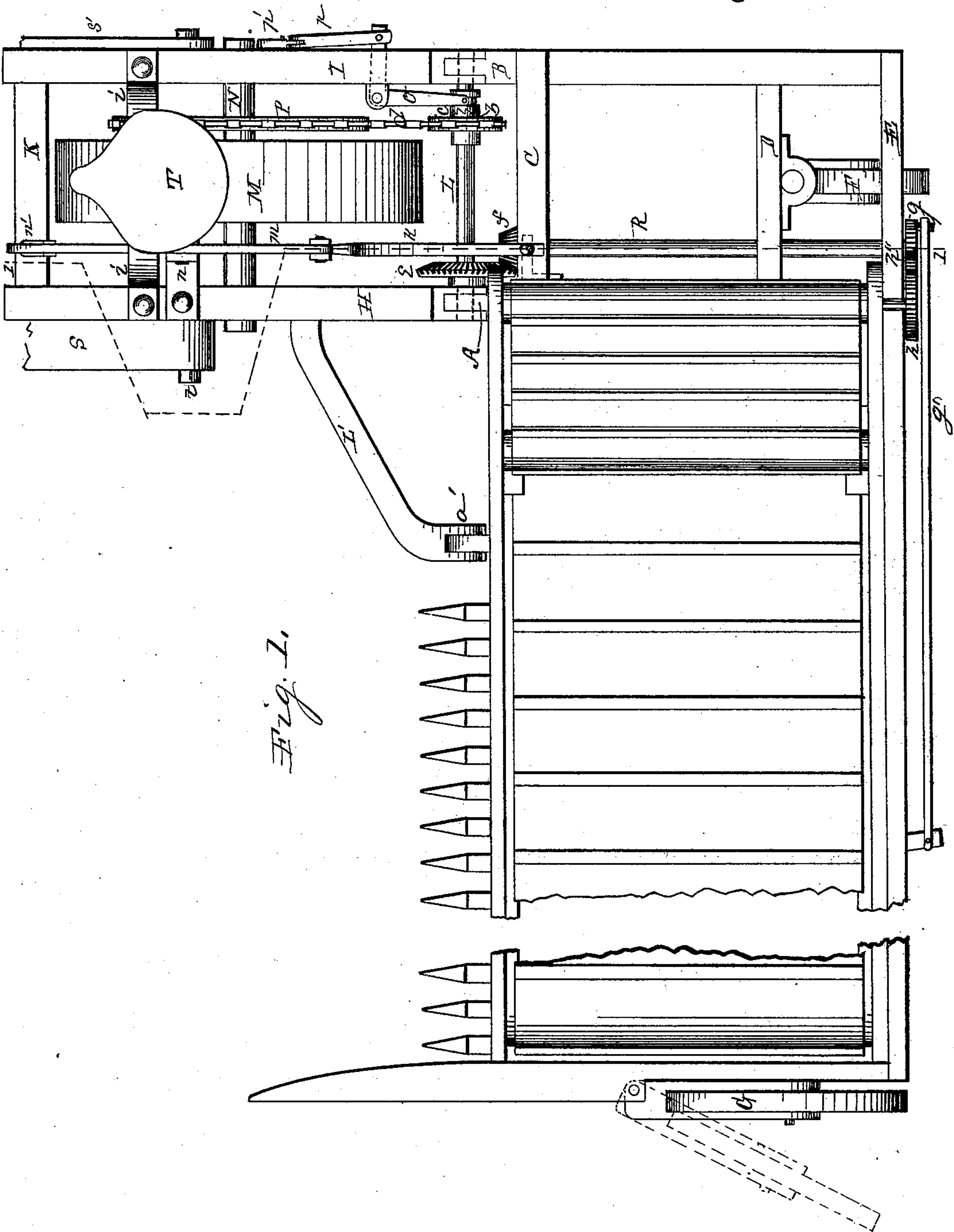
2 Sheets—Sheet 1.

C. EYSTER & J. BUGH.

HARVESTING MACHINE.

No. 367,381.

Patented Aug. 2, 1887.



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(No Model.)

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Fig. 2.

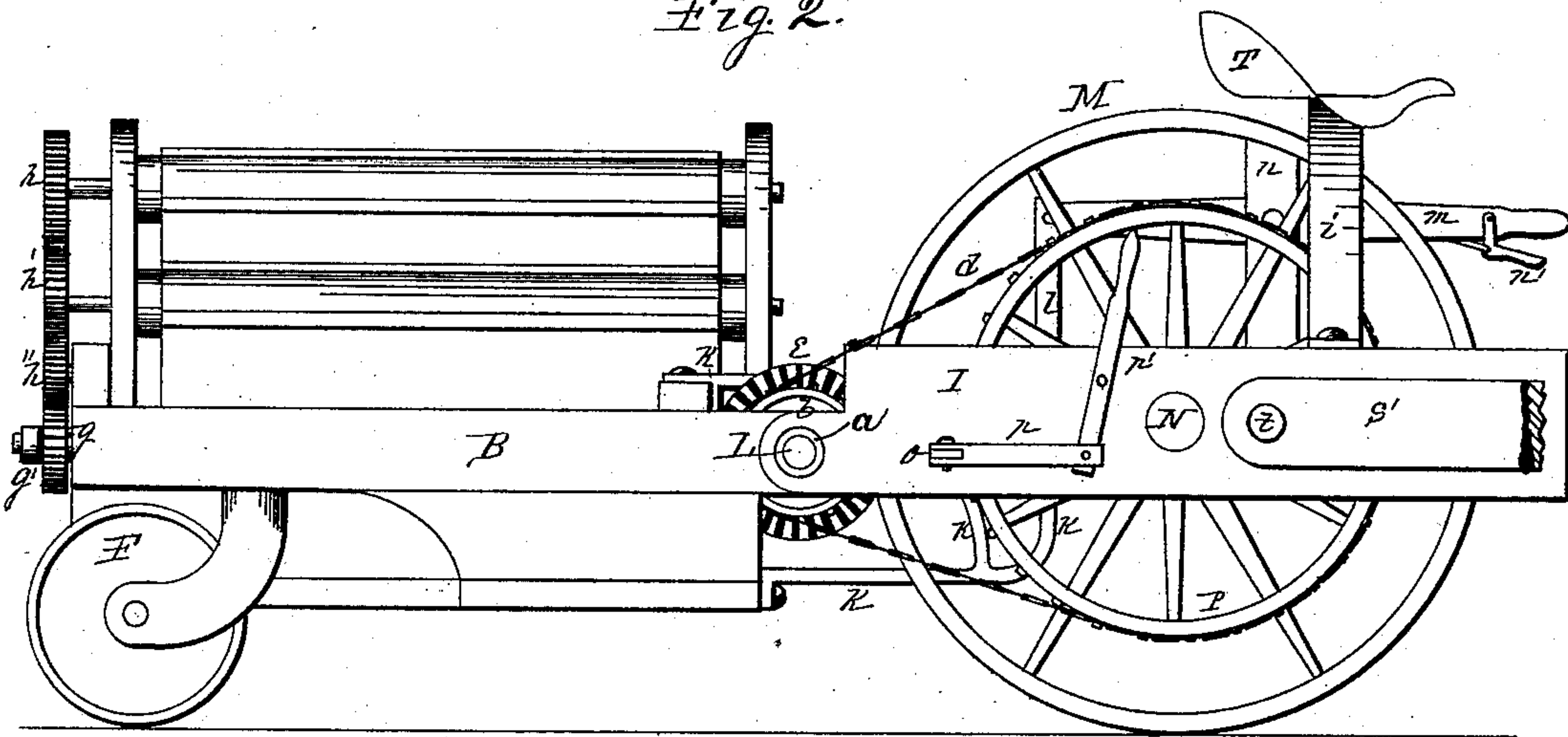


Fig. 3.

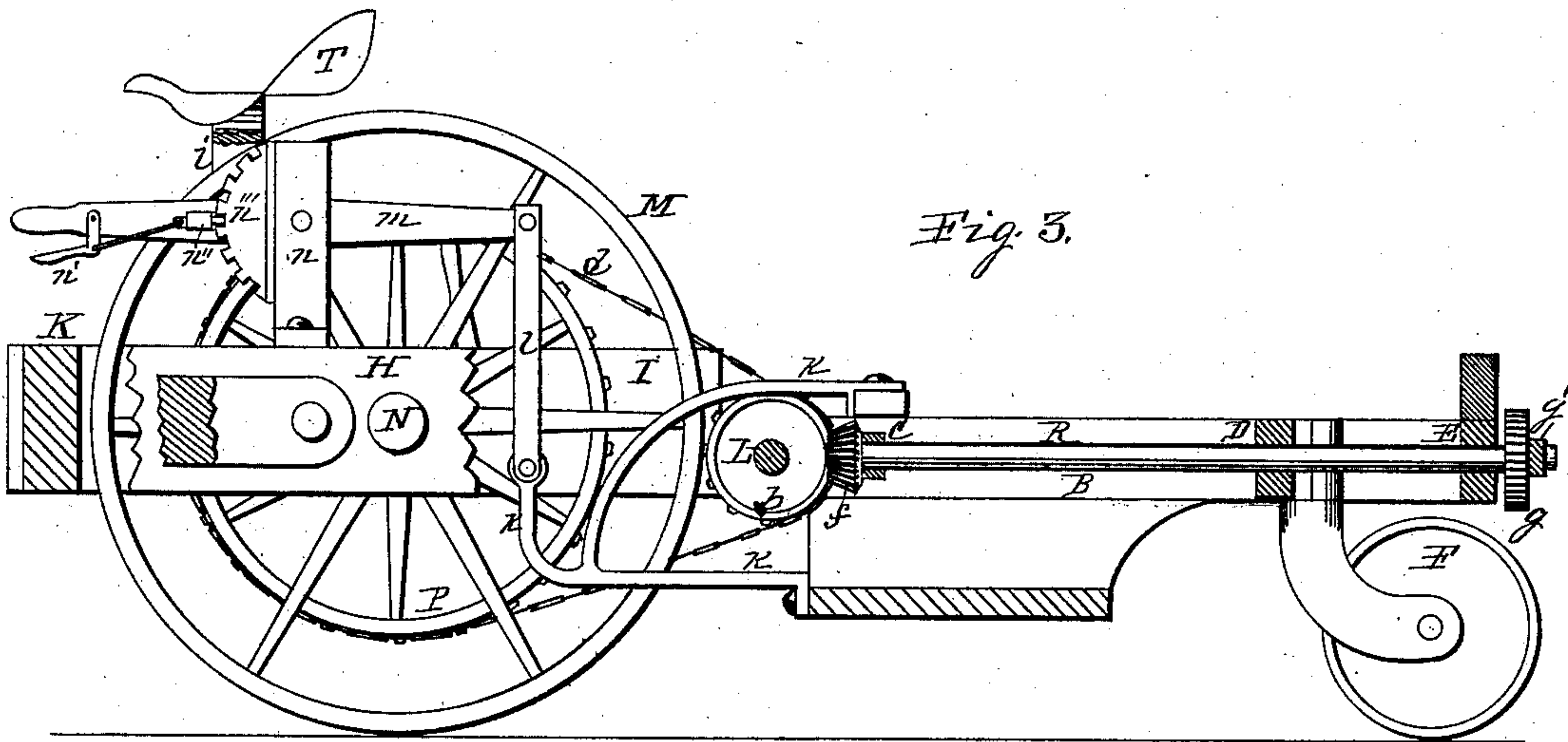
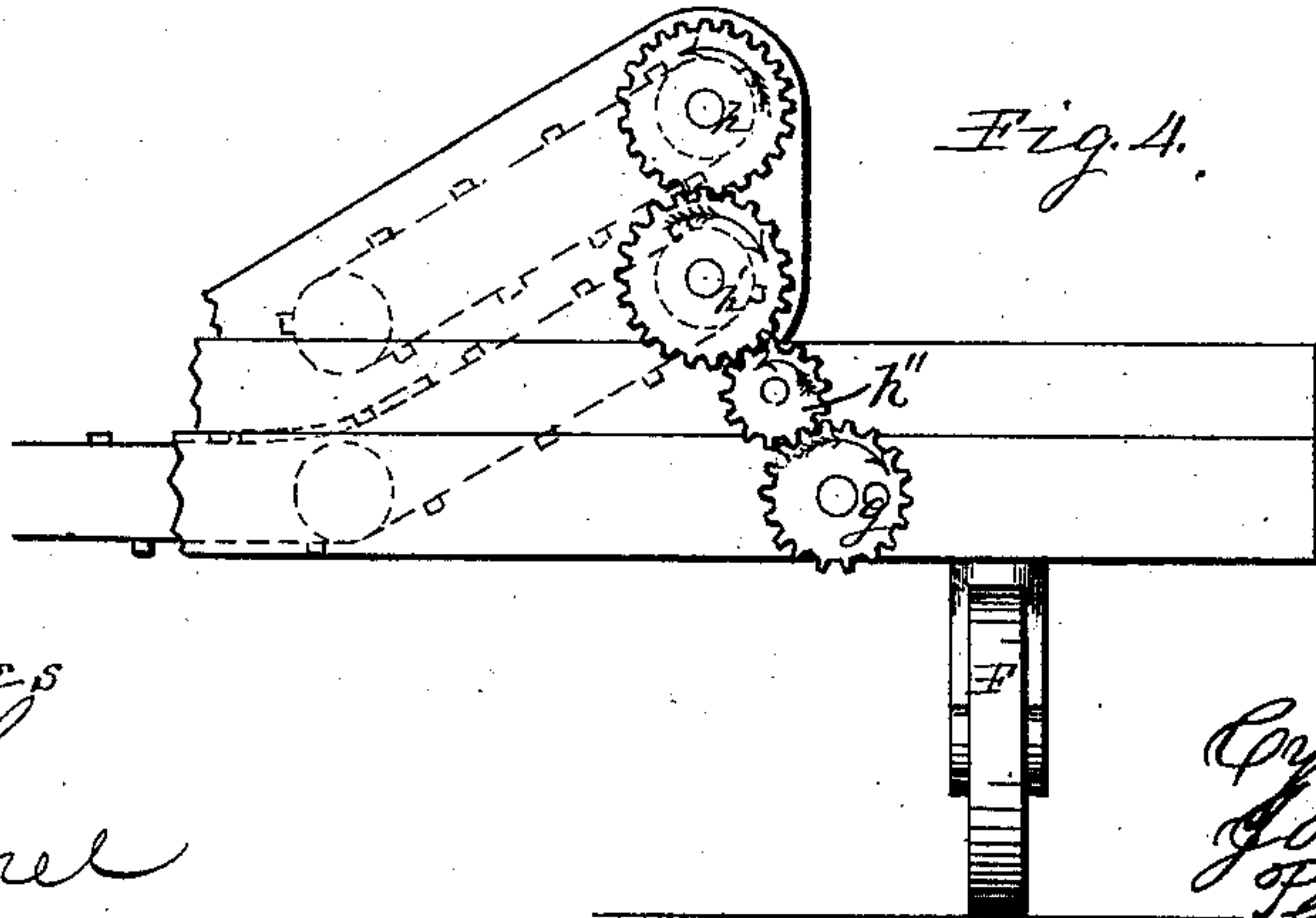


Fig. 4.



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UNITED STATES PATENT OFFICE.

CYRUS EYSTER AND JOHN BUGH, OF HOLCOMB, ILLINOIS.

HARVESTING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 367,381, dated August 2, 1887.

Application filed February 5, 1885. Serial No. 155,025. (No model.)

To all whom it may concern:

Be it known that we, CYRUS EYSTER and JOHN BUGH, citizens of the United States, residing at Holcomb, in the county of Ogle and State of Illinois, have invented new and useful Improvements in Harvesting-Machines, of which the following is a specification.

This invention relates to harvesting-machines of a class with which it is designed to use an automatic binding mechanism; and the said invention consists in the improved features of construction, hereinafter described, and set forth in the claim.

In the accompanying drawings, forming part of this specification, Figure 1 is a plan view of a machine embodying our invention. Fig. 2 is an elevation of the driving-wheel end. Fig. 3 is a vertical section on dotted line 1 on Fig. 1, in which portions are shown in full; and Fig. 4 is a rear elevation of a portion of the driving-wheel end of the machine.

In the harvester hereinafter described the main portion of the platform-frame, divider, grain-wheel, cutting apparatus, and carrying and elevating aprons are substantially the same as like parts heretofore employed in like machines, and we do not deem it necessary to give a more detailed description thereof in this specification.

The driving-wheel end of the platform-frame, consisting of the lengthwise beams A and B and the transverse beams C, D, and E, extending beyond the carrying and elevating aprons, is designed to receive and support a grain-binding mechanism in position to receive the cut grain delivered by the carriers. The driving-wheel end of the platform is supported rearward of its center upon a caster-wheel, F, having a caster-yoke connection with the transverse beam D of the platform, and, in connection with the grain-end caster-wheel G, will permit the platform to turn in any required direction.

At H and I are represented side beams and at K a transverse beam, securely framed and joined to each other, producing a driving-wheel frame rectangular in plan. The rear ends of the side beams, H and I, of the wheel-frame are hinge-jointed to the forward ends of the end beams, A and B, of the platform-frame. The journal-supports *a* of the hinged connection of the platform with the driving-wheel

frame are tubular and furnish the bearings in which the counter-shaft L is supported to revolve.

At L' is represented a brace fixed to the wheel-frame, from which it extends inward to engage the platform-frame, to which it is hinge-jointed at *a'* in line with the axial center of the counter-shaft.

At M is represented the driving-wheel, placed within the wheel-frame and having the journal ends of its shaft N supported to revolve in suitable bearings in the side beams of the frame.

At P is represented a sprocket-wheel fixed on the shaft N of the drive-wheel to revolve therewith.

At *b* is represented a sprocket-wheel mounted loosely upon the counter-shaft L, in position thereon to line with the sprocket-wheel P on the drive-wheel shaft.

The hub of the sprocket-wheel *b* on its counter-shaft is fitted in clutch-tooth form to engage the teeth of a clutch, *c*, fixed to the shaft, to revolve therewith, but capable of an endwise-sliding movement thereon to engage the clutch-teeth of the sprocket-wheel, to cause it to revolve with the shaft, and to be disengaged therefrom to permit the wheel to revolve on the shaft. The sprocket-wheels P and *b* are provided with a chain belt, *d*, having links to engage the teeth of the wheels to impart motion from the drive-wheel to the counter-shaft. The counter-shaft is fitted with a bevel-toothed gear-wheel, *e*.

At R is represented a crank-shaft having a bevel-toothed gear-pinion, *f*, fixed on its end portion. This crank-shaft R is supported to revolve in bearings in the end portion of the platform, and in such position thereon that the teeth of the pinion shall engage the teeth of the gear-wheel in working contact. The outer end of the crank-shaft is provided with a gear-toothed crank-head, *g*, fitted with a wrist-pin to receive the pitman *g'*, employed to impart motion to the sickle.

At *h* and *h'* are represented toothed gear-wheels fixed on the projecting ends of the apron-carrying rollers.

At *h''* is represented an intermediate toothed gear-wheel supported in position to engage the teeth of the crank-head and of the gear-wheel *h'* in such a manner that motion from

the crank-head will impart motion to the gear-train in the direction indicated by the arrows and to the aprons on the roller with which the gear-wheels are connected.

5 At T is represented a driver's seat fixed to supports *i*, rising from the side beams of the wheel-frame, to which they are fixed. The forward edge of the platform is provided with a bracket-extension consisting of the metallic
10 bars *k*, produced in the bracket form shown, fixed at its rear end to the forward edge portion of the platform, from which it projects in the direction of the draft-line.

At *l* is represented a connecting-bar hinge-
15 jointed at its lower end to the forward end of the bracket, and its upper end is hinge-jointed to the rear end of a lever, *m*, having its fulcrum-support on a standard, *n*, rising from its connection with the wheel-frame. The forward
20 end of the lever *m* is produced in handle form, and is fitted with a thumb-lever, *n'*, and spring-actuated bolt-detent *n''*, to engage the teeth of a segment-rack, *n'''*, fixed to the standard *n*. The construction and arrangement of
25 these parts are such, as will be seen from an inspection of the drawings, that the downward movement of the free handle end of the lever will raise the front edge of the platform at its hinged connection with the wheel-frame, and
30 the upward movement of the handle end of the lever will depress or lower the front edge of the platform or cutting apparatus to vary the height of cut.

At *o* is represented a bell-crank lever connected with the clutch *c*, and a link, *p*, connects the bell-crank lever with a hand-lever,
35 *p'*, pivoted to the wheel-frame, from which it rises in position to be operated by the driver mounted in his seat to connect and disconnect
40 the clutching mechanism to stop and start the several parts connected with the movement.

In this machine we employ a tongue having a hinged connection with the driving-wheel
45 frame. Of this tongue we have only represented the rear end portion, *s*, and the hound *s'*, to show their hinged connection at *t* with the side beams of the wheel-frame. The hound *s'*, from its hinged connection with the wheel-

frame, extends parallel with the side beam thereof past its forward end, and there is
50 curved or bent inward to engage the tongue, to which it is securely fixed by means of sufficient screw-bolts.

From the foregoing it will be seen that the harvesting-machine described is of a simple
55 construction, capable of the required movements and adjustments necessary to adapt it to the requirements of a complete machine, and that the said machine is fitted to receive and support an automatic binding mechanism
60 in rear of the driving-wheel in position to receive its cut grain delivered by the carriers. It will further be seen that by this construction we reduce the width of the machine to such an extent as to render it more convenient in
65 handling, and that will permit its passage through fence-openings of ordinary width.

In the foregoing we have only represented such parts of a machine believed to be necessary to a complete understanding of our inven-
70 tion, and the several parts not herein described necessary to a complete machine may be any of the known forms capable of use in connection with the parts herein shown and described.

We claim as our invention—

75 The combination, with the main wheel-frame carrying the driving-wheel, of a counter-shaft driven thereby and journaled in said frame at the rear of the driving-wheel, a gear-wheel mounted on said counter-shaft, a platform pro-
80 vided with an endless carrier and having an extension in the rear of said frame, said platform and extension being hinged to the frame by means of the counter-shaft, and a shaft, *R*, for actuating the carrier, having a pinion mesh-
85 ing with the gear-wheel on the counter-shaft, as described, brackets *k* secured at their rear to the extension, and lever appliances mounted on the wheel-frame and connected to the front ends of said brackets, substantially as set forth. 90

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