

(No Model.)

2 Sheets—Sheet 1.

G. H. BARTLETT & J. A. JOHNSON.
MOWING MACHINE.

No. 372,354.

Patented Nov. 1, 1887.

Fig. 1.

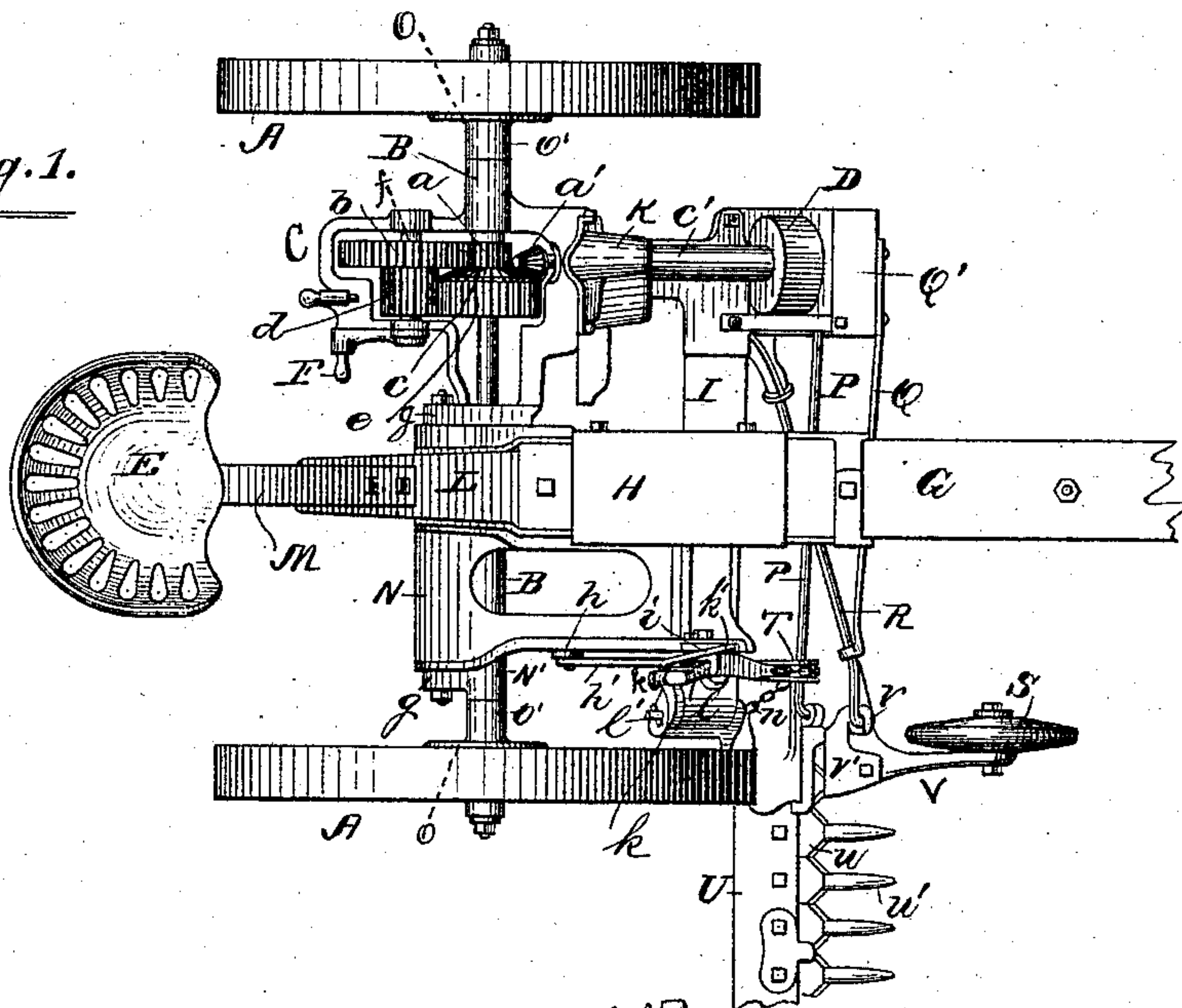
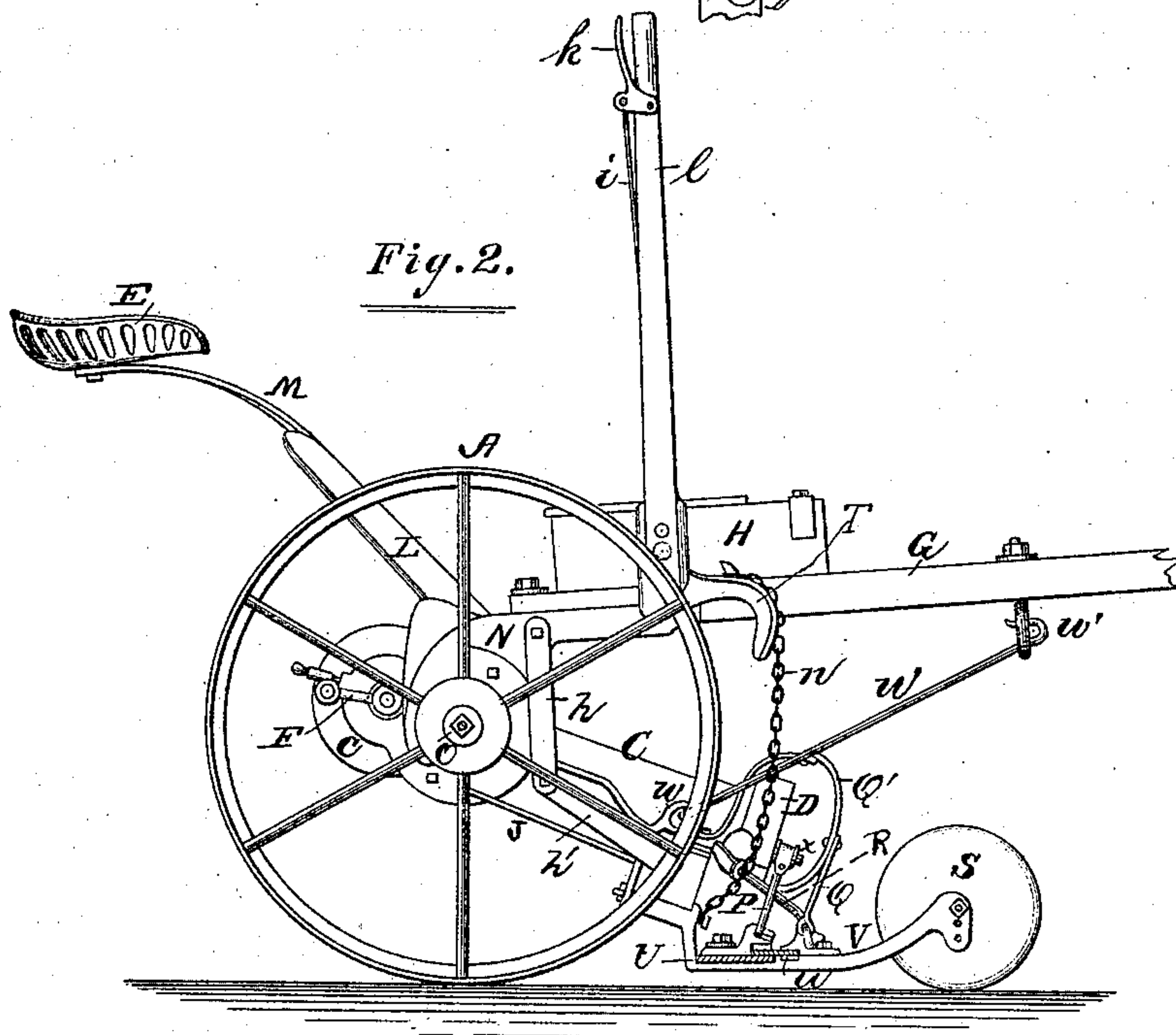


Fig. 2.



Witnesses.

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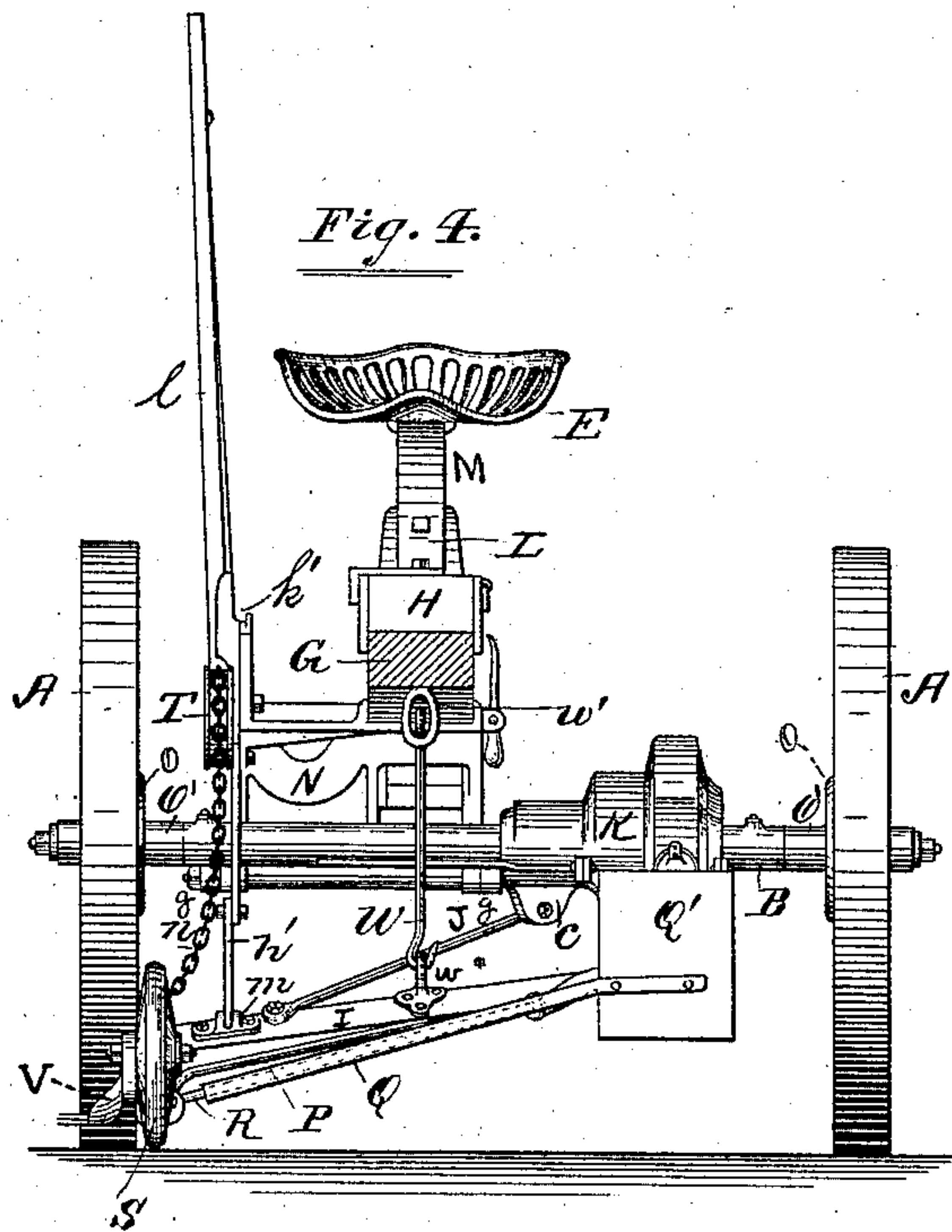
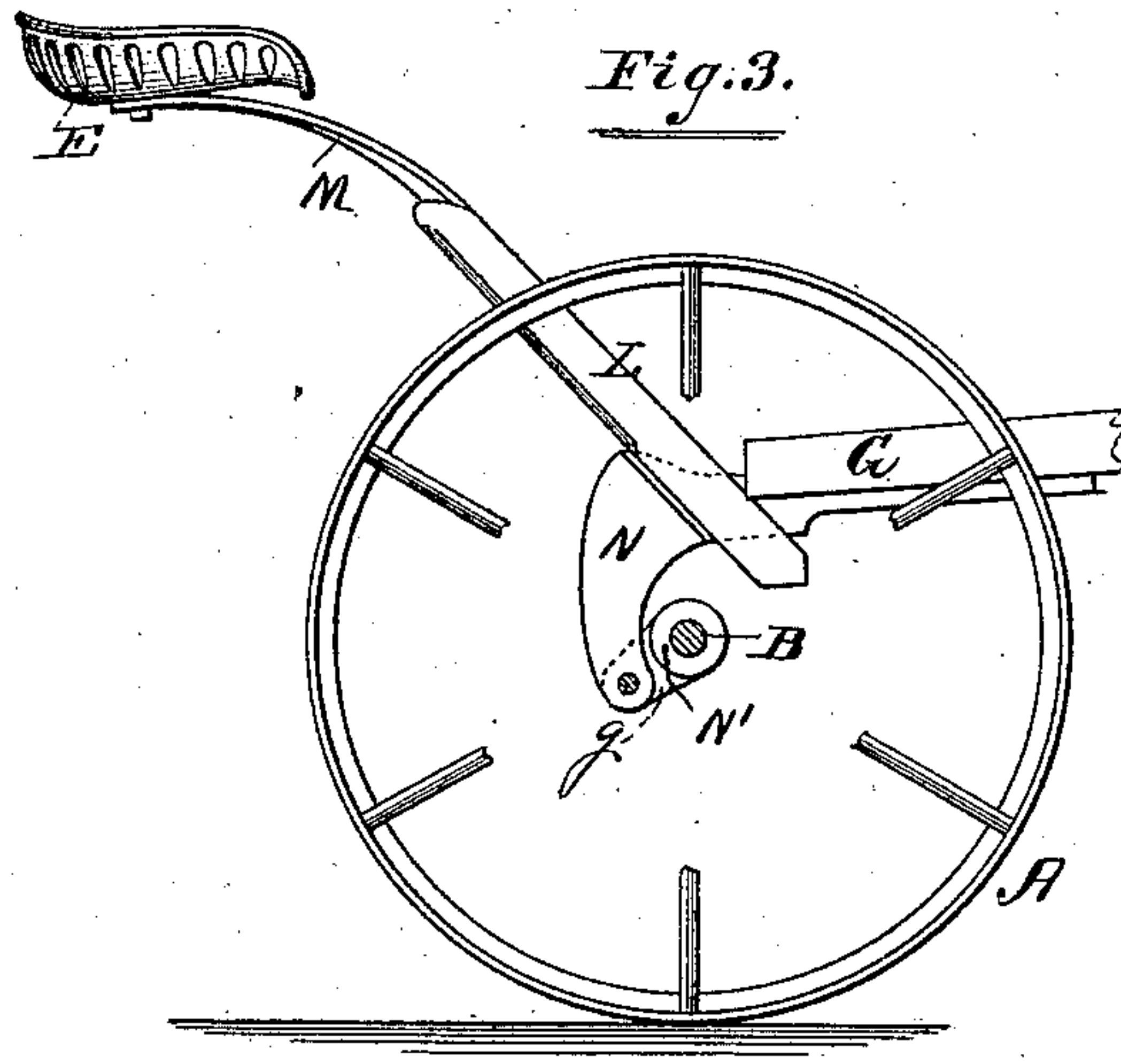
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Henry Frankfort,
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UNITED STATES PATENT OFFICE.

GEORGE HERMAN BARTLETT AND JOHN A. JOHNSON, OF MADISON,
WISCONSIN.

MOWING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 372,354, dated November 1, 1887.

Application filed August 18, 1884. Serial No. 140,897. (No model.)

To all whom it may concern:

Be it known that we, GEORGE HERMAN BARTLETT and JOHN A. JOHNSON, residing at Madison, in the county of Dane and State of Wisconsin, and citizens of the United States, have invented new and useful Improvements in Mowing-Machines, of which the following is a full description, reference being had to the accompanying drawings, in which—

Figure 1 is a top or plan view with the tongue and cutter-bar broken off; Fig. 2, a side elevation with the tongue broken off and the cutter-bar in section; Fig. 3, a detail with all the working parts removed, showing the relative relations of the axle-tongue and its support and the seat and its support; Fig. 4, a front elevation, with the tongue in cross-section.

This invention relates to that class of mowing-machines in which the cutting apparatus is hung or suspended from a vibrating frame mounted on the axle; and it consists in the construction and combination of parts hereinafter claimed.

In the drawings, A represents the carrying-wheels, one for each side of the machine, which wheels may be of any of the usual forms of construction for such wheels.

B is the axle, of a round form in cross-section, and having at each end a spindle for the hubs of the carrying-wheel.

C is the main frame of the cutting apparatus, formed of malleable iron or other suitable material, having at its rear end a box or frame for the location of the driving-gear, as shown in Fig. 1, and having its front end formed to furnish a bearing for the driving-shaft of the crank-wheel and an attachment for the bars which support the sickle-bar.

D is the crank-wheel for imparting the reciprocating movement to the sickle. This wheel is secured to the forward end of the crank-shaft, which shaft revolves in the box or bearing *c'* on the forward end of the main frame, and is driven by the bevel-pinion *a'*, through the gear-wheel *e*, from the gear-wheel *e*, which wheel is mounted on the axle B and drives the gear-wheel *d*, mounted on the shaft *f*, located in the rear portion of the

main frame, on which shaft is the gear-wheel *b*, which meshes with the gear-wheel *a* on the axle B as the axle is rotated with the forward movement of the machine. The gear-wheel *e* is fast upon the axle B and drives the gear-wheel *d*, rotating the shaft upon which it is mounted, and revolving the wheel *b*, which drives the gear-wheel *a*, which wheel is connected with the beveled pinion *c*, so as to drive the pinion *a'*.

E is the driver's seat, located to bring the driver at the rear of the machine.

F is a lever for disengaging the wheels *d* and *e* and stopping the rotation of the crank-wheel D.

G is the tongue, made of wood or other suitable material, as usual.

H is a foot-rest located on the rear end of the tongue, on which the driver when on his seat can place his feet.

I is a spring-bar bolted or otherwise attached at its inner end to the forward portion of the frame C, and suitably attached at its outer end to the inside shoe of the cutter-bar, so that a pivoted connection is formed between the shoe and the bar I for lifting and folding the cutter-bar.

J is a spring-rod, the inner end of which is attached to the forward end of the frame C by a bolt or otherwise to form a pivotal connection, and the outer end of which is bolted or otherwise secured to the connecting-bar I inside of the shoe; K, the cover, corresponding to the shape of the main frame C, and forming with the main frame a tight box or case for enclosing the gearing.

L is the seat standard or support, the lower end of which is carried by the vibrating support which carries the tongue, so that the tongue and seat will move together.

M is a bar connecting the seat E with the seat-standard L.

N is the support for the tongue and seat, formed of malleable iron or other suitable material, having at each end a depending ear or pendant, which ears are pivotally connected with arms *g*, extending out from the ends of a tubular box or bearing, N', mounted on the axle B, as shown in Fig. 3. This tubular box

or bearing N' is a rear extension of the main frame C, and when the main frame is in position the arms *g*, which carry the tongue-support N, have a rearward and downward inclination, and as this support N also carries the driver's seat through the standard L it will be seen that the driver's seat and tongue and main frame all have unity of movement.

O represents the plates carrying the actuating-pawls connecting the wheels with the axle. These plates are formed alike, and have at their center a hub or extension, O', by means of which they are attached firmly to the axle.

P is the pitman, connected at its inner end to a crank or wrist pin, *x*, on the wheel D, and connected at its outer end with the cutter or sickle.

Q is a spring located in front of the pitman, and attached at one end to the shield Q' for the crank wheel, and attached at the other end to the truss or brace rod for the inner shoe. This spring forms a guard against the bending of the pitman-rod in case the machine runs against an obstruction, and also prevents injurious effects or a severe jar to the machine when the front part of the machine encounters an obstruction.

R is the truss rod or brace between the inner shoe and the main frame.

S is the supporting-wheel for the forward end of the inner shoe.

T is a rocking arm having a curved portion, over and through which one end of a chain, *n*, is passed and secured. The other end of the chain is attached to the rear end of the inner shoe; and to this rocking arm is attached a lever, *l*, by means of which the arm can be rocked to raise and lower the cutting apparatus through the chain *n*, and this lever is locked in position by a spring-pawl operated through the rod *i* and bell-crank lever *k*, as usual.

U is the finger-bar, of the ordinary construction, attached at its inner end to the inner shoe in the usual manner.

Y is the inner shoe, the front end of which is carried by the wheel S, and its rear end is supported through the link-rods *h h'*, so as to allow of a rocking movement. The two rods *h h'* are pivotally connected together, and the forward end of the rod *h'* is pivotally connected between ears *m* on the supporting-bar I.

W is a brace or connecting rod, one end of which is attached to an eye, *w*, on the bar I and the other to an eyebolt, *w'*, on the tongue,

so as to furnish a connection between the tongue and the bar which will allow the cutting apparatus to be raised and lowered.

The operation is as follows: The machine is drawn forward over the ground, as usual, imparting rotation to the axle, and through the gears *a, b, c, d, e*, and *a'* driving the crank-wheel D, and through the pitman-rod P reciprocating the cutters, as usual; and when the driver for any cause wishes to raise the cutting apparatus he can do so by taking hold of the lever *l* and moving such lever back, and in thus lifting the cutting apparatus it will be seen that he has the additional advantage of his own weight to assist him by reason of the location of the seat at the rear of the machine and the support for the seat being located at the rear and downward from the main frame, which throws his weight onto the rear end of the main frame, counterbalancing to that extent the weight of the cutting apparatus.

The supporting of the tongue and seat from the same carrying device, with a pivotal connection to the main frame, enables the tongue and seat to self-adjust themselves as required without changing the position of the frame, and by providing a truss-rod running from the inner shoe to the main frame the straining and racking of the shoe and frame from the strokes of the knife is prevented to a large extent, and at the same time the hinged connection of this truss-rod with the shoe enables the finger-bar to be folded and the shoe to rise and fall as required when running over the ground. The spring-guard attached to the truss-rod and to the shield of the crank-wheel furnishes a prevention against injury to the machine in the event of striking obstructions.

What we claim as new, and desire to secure by Letters Patent, is as follows:

The combination, with the frame C, crank-shield Q', inner shoe, V, and truss-rod R, of the spring-guard Q, consisting of a bar of spring metal secured at one end to the front of the crank-shield, and provided at its other end with an eye, by which it is sleeved to slide on the truss-rod, substantially as described.

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