3 Sheets—Sheet 1.

H. FISHER.

Mower.

No. 24,860. Patented July 26, 1859.

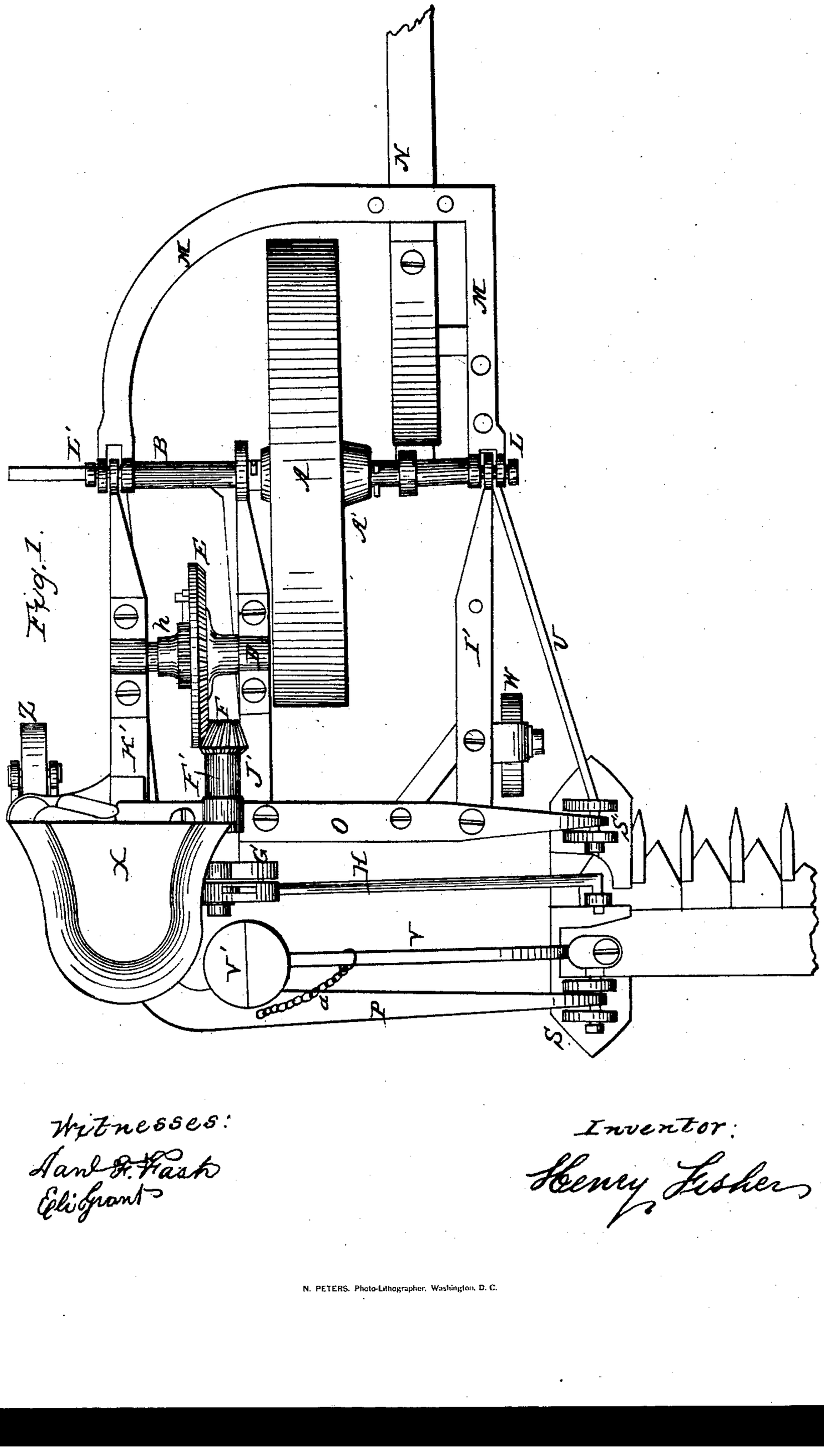

Fig. 1.

Witnesses:

Aaron F. Nash

Eli Grant

Inventor:

Henry Fisher

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H. FISHER.

Mower.

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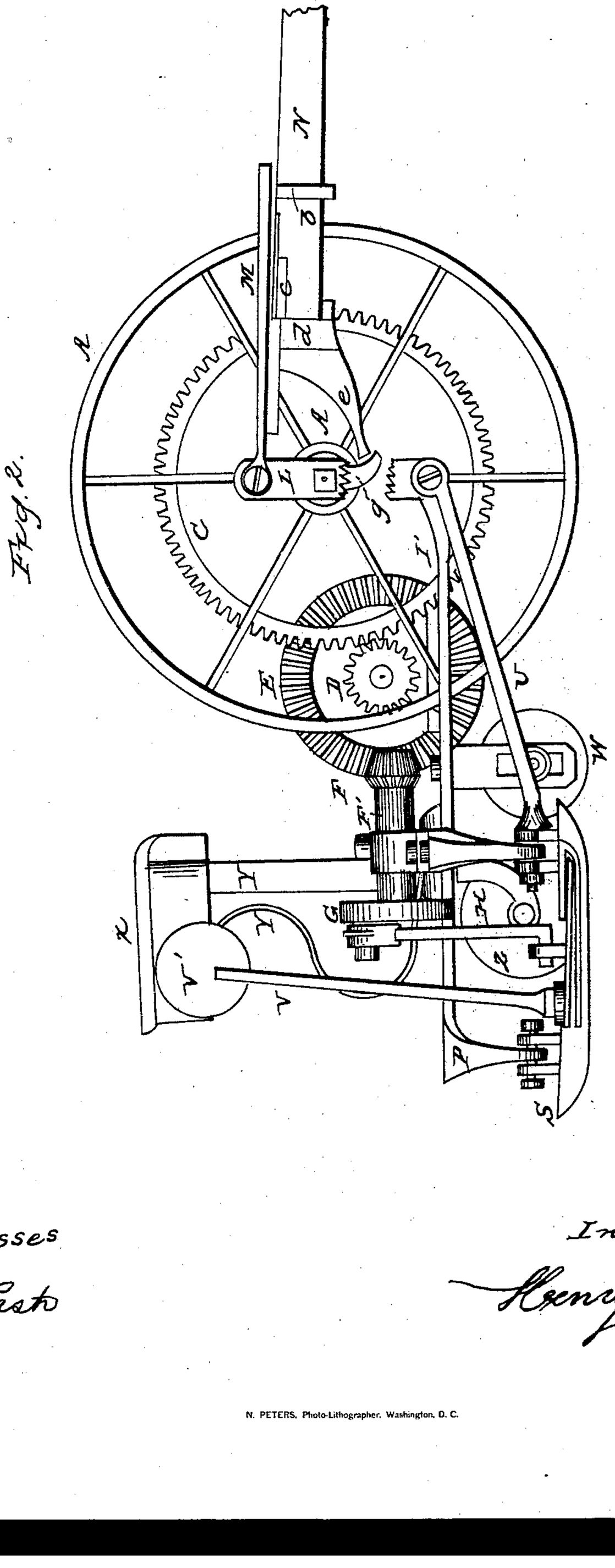

Fig. 2.

Witnesses

Dan'l. Frost
Edi Grant

Inventor:

Henry Fisher

3 Sheets—Sheet 3.

H. FISHER.

Mower.

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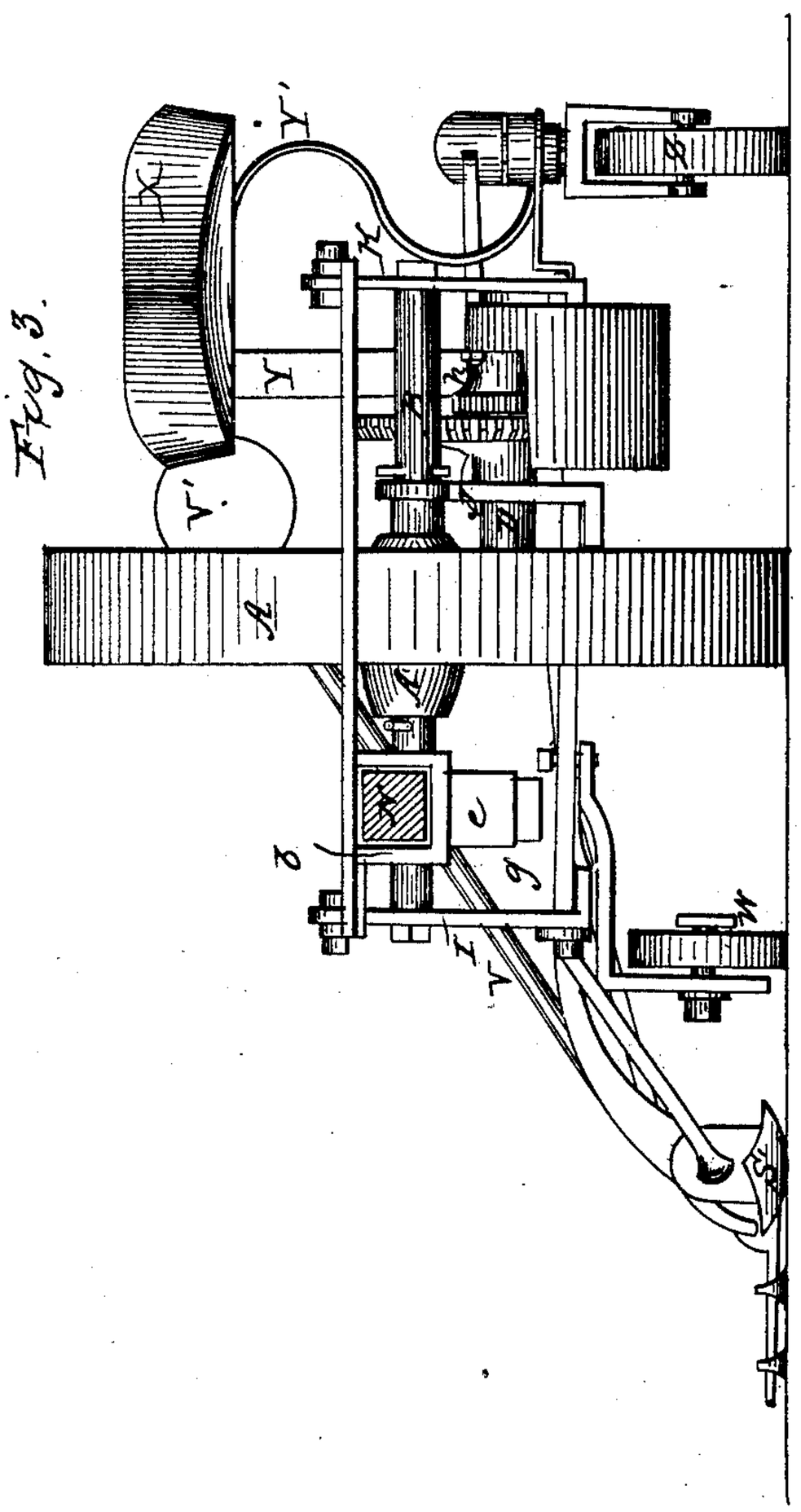
Fig. 3.



Witnesses:

Aaron F. Frost
Eli Grant

Inventor:

Henry Fisher

UNITED STATES PATENT OFFICE.

HENRY FISHER, OF ALLIANCE, OHIO.

IMPROVEMENT IN HARVESTERS.

Specification forming part of Letters Patent No. **24,860**, dated July 26, 1859.

To all whom it may concern:

Be it known that I, HENRY FISHER, of Alliance, in the county of Stark and State of Ohio, have invented new and useful Improvements in Mowing-Machines; and I do hereby declare that the following is a full and complete description of the construction and operation of the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a top view. Fig. 2 is a side view, and Fig. 3 is an end view.

Like letters refer to like parts.

A in the several figures represents the driving-wheel. The hub A′ revolves upon the stationary axle-tree B. The driving cog-wheel C is attached to the arms of the driving-wheel.

D represents the pinion that is driven by the wheel C. Upon the shaft of this, D′, is the bevel-wheel E, and this drives the bevel-pinion F upon the shaft F′. Upon the opposite end of this shaft is the crank-wheel G, to which is attached the connecting-rod H, which communicates motion to the knife-bar in the usual manner.

The frame of the machine consists of the pieces I I′ J J′ K K′, and other parts, hereinafter to be described. The upright parts I J K are rigidly attached to the axle-tree B in any convenient manner. The two outside ones, I and K, extend nearly a foot above the axle-tree, as seen at L L′, Fig. 2, and serve as points of attachment for the draw-bars M M, to which the neap N is attached.

At L L′ there is an articulation between the draw-bar M and the upright pieces I and K. The frame-pieces I J K extend downward from the axle-tree six or eight inches and turn backward at right angles, as seen at I′ J′ K′, and are secured to a piece running parallel with the axle-tree, as seen at O, Fig. 1. The piece K′ does not terminate at the piece O, but continues in a backward direction about one foot farther, and curves to the right and runs parallel to the piece O, as seen at P, Fig. 1, and thus forms an attachment for the heel of the shoe S, at which point it curves downward, as seen in Fig. 2, and attaches to the back end of the shoe by a pin or hinge-joint, as seen at S. The piece O curves downward in like manner, and is attached to the forward end of the shoe by a pin or hinge-joint, as seen at S′, Fig. 1.

The finger-bar T is rigidly attached to the shoe S S′, and articulates with the shoe upon the bars O P. A brace, U, supports the forward end of the shoe, the back end of the brace forming the pin upon which the shoe articulates upon the piece O, the same being upon a line with the articulation S. The forward end of this brace extends to the angle of the piece I′, thus giving the several parts firmness and support.

For the purpose of balancing the finger-bar I attach to it, at its junction with the shoe, a weighted lever, V, the weight V′ being near the driver's seat, so that a slight pressure with the hand will depress the lever and raise the cutter-bar from the ground. A chain or cord, *a*, is attached to the frame P and connects with the lever V, for convenience of securing the finger-bar at any desired elevation.

A supporting-wheel, W, is placed under the bar I′, near the shoe, the object of which is to keep the machine steady while at work.

The driver's seat X is mounted upon the springs Y Y′, having their curvatures in different directions, in order to give steadiness to the seat. The spring Y is attached to the end of the frame-piece O, and the spring Y′ is attached to an arm that carries the caster-wheel Z.

The tongue or neap N is attached to the draw-bar M by means of a band, *b*, through which the tongue passes loosely, the back end of which is supported by a guide, *d*, and slot *c*, so that the tongue has a little play backward and forward. Thus when the draft is put upon it the pieces L L′, projecting above the axle-tree, give a greater traction to the driving-wheel than they would do if the draft were from a point below the axle-tree; or, in other words, the downward action of the draft upon the arms L L′ increases the friction of the driving-wheel upon the ground, and at the same time tends to elevate the cutters. Consequently I am able to use a very light machine and yet insure the movement of the cutters without materially increasing the draft. The back end of the tongue is armed with a spur, *e*, which projects backward and downward from six inches to a foot, which meets an arm, *g*, that is attached to the axle-tree below the center of the driving-wheel, so that when the machine is backed the spur *e* presses against the arm *g* and tends to raise the finger-bar from the ground, or at least fo lighten its

pressure. In backing the machine the knives cease their motion in consequence of the bevel-wheel E being allowed to revolve upon the shaft D′, but is held by a pawl and ratchet, *h*, when the machine is drawn forward.

I am aware that the team-shaft of harvesters has been attached below the axle, so that the draft would tend to elevate the cutters by a rotary or lifting action. Therefore I do not claim such attachment or action; but my mode of attaching the shaft not only tends to elevate the cutters, but the draft itself presses downward upon the main wheels, thus preventing the latter from sliding upon the ground. This double action I believe to be new and a substantial improvement in harvesters.

What I claim as my improvement, and desire to secure by Letters Patent, is—

1. Attaching the draft or draw bars M M′ to the arms L L′ in the manner and for the purposes substantially as set forth.

2. The peculiar arrangement and combination of frames I, K, and M, tongue N, spur *e*, and arm *g* in relation to each other and to the main shaft B, to operate in the manner and for the purpose specified.

HENRY FISHER.

Witnesses:
SIMON EBY,
W. H. TEEL.