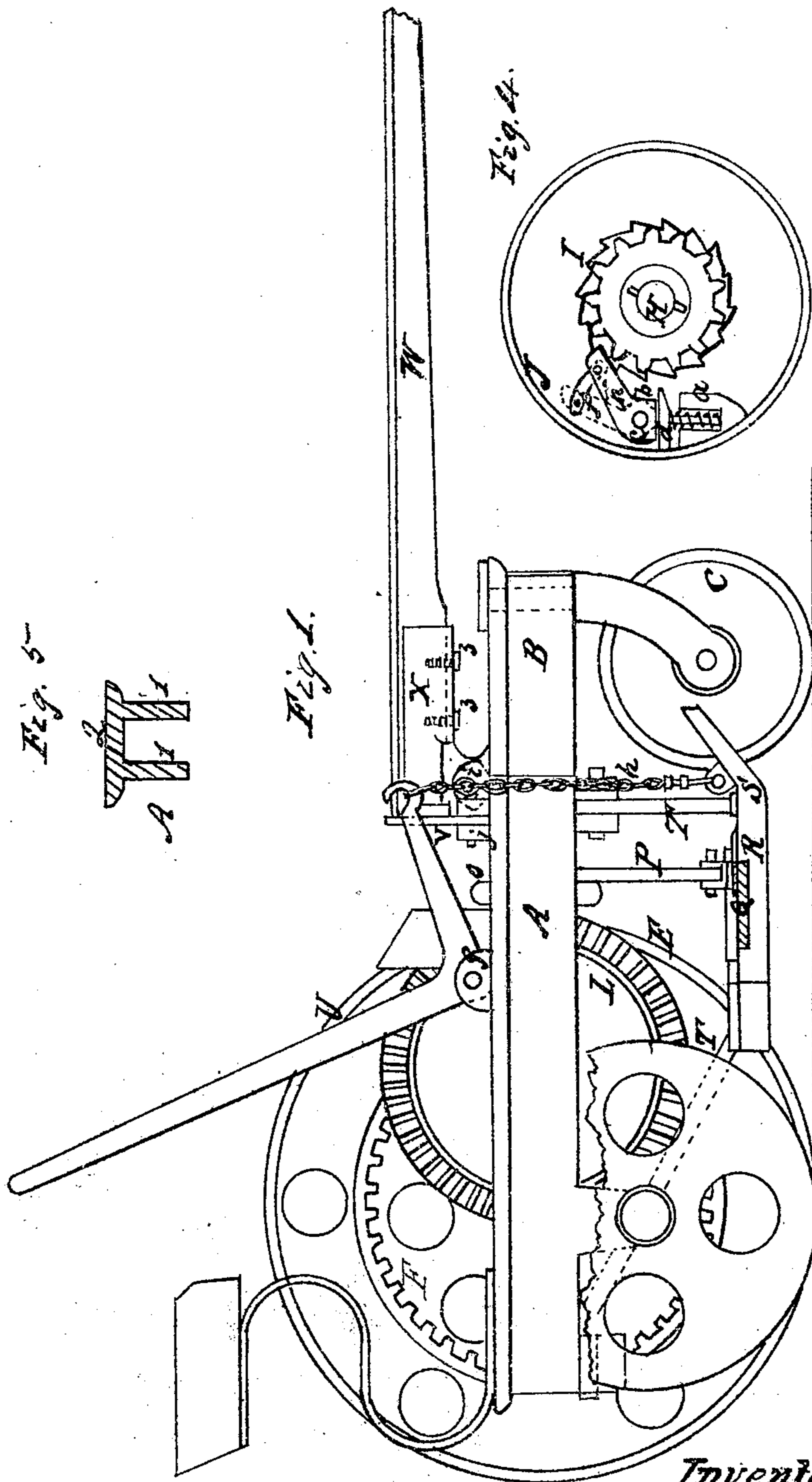


J. W. Shipman.

Mower.

N^o 29325

Patented Jul 24, 1860.



Witnesses.

R. S. Ames.
J. W. Corbin.

Inventor.

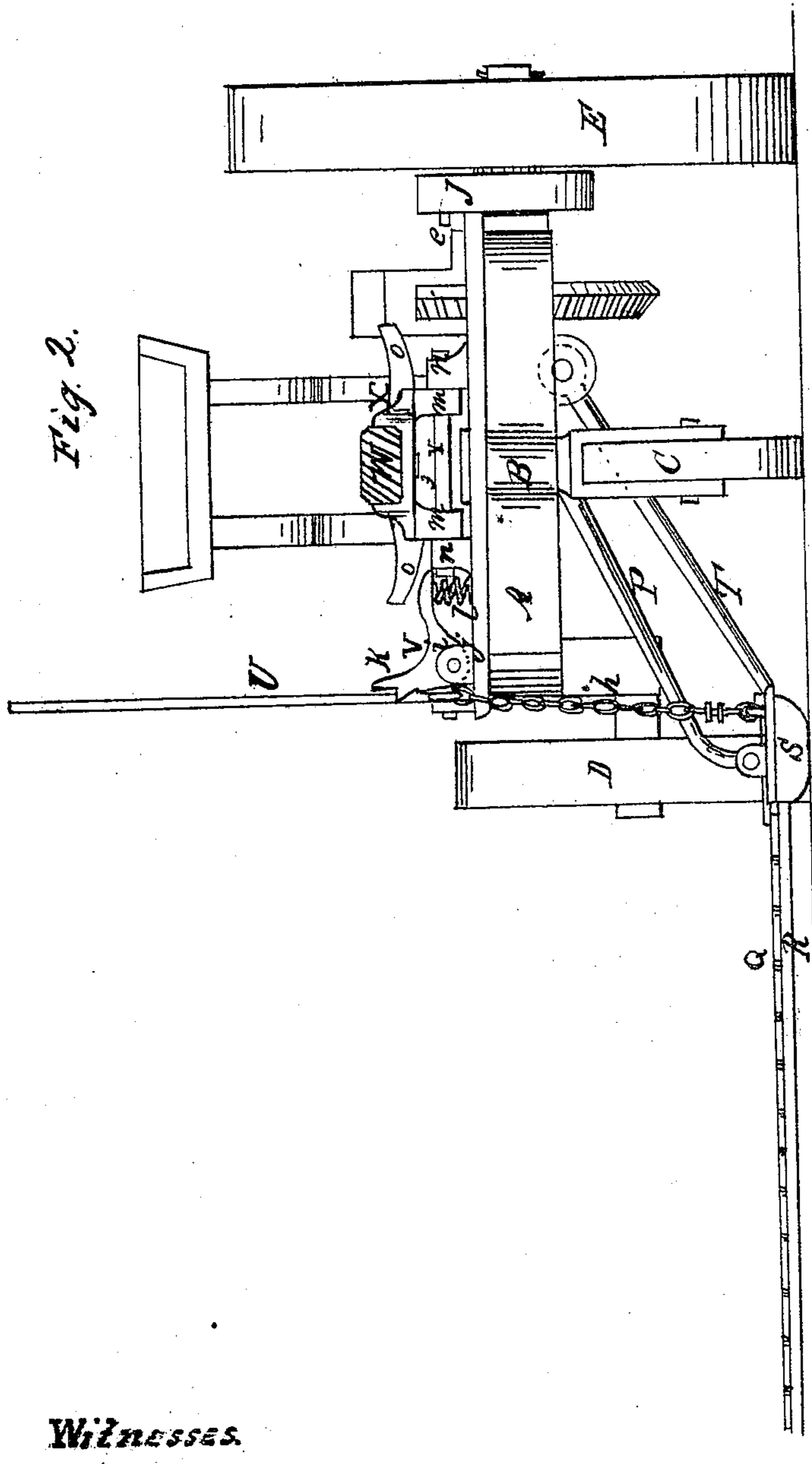
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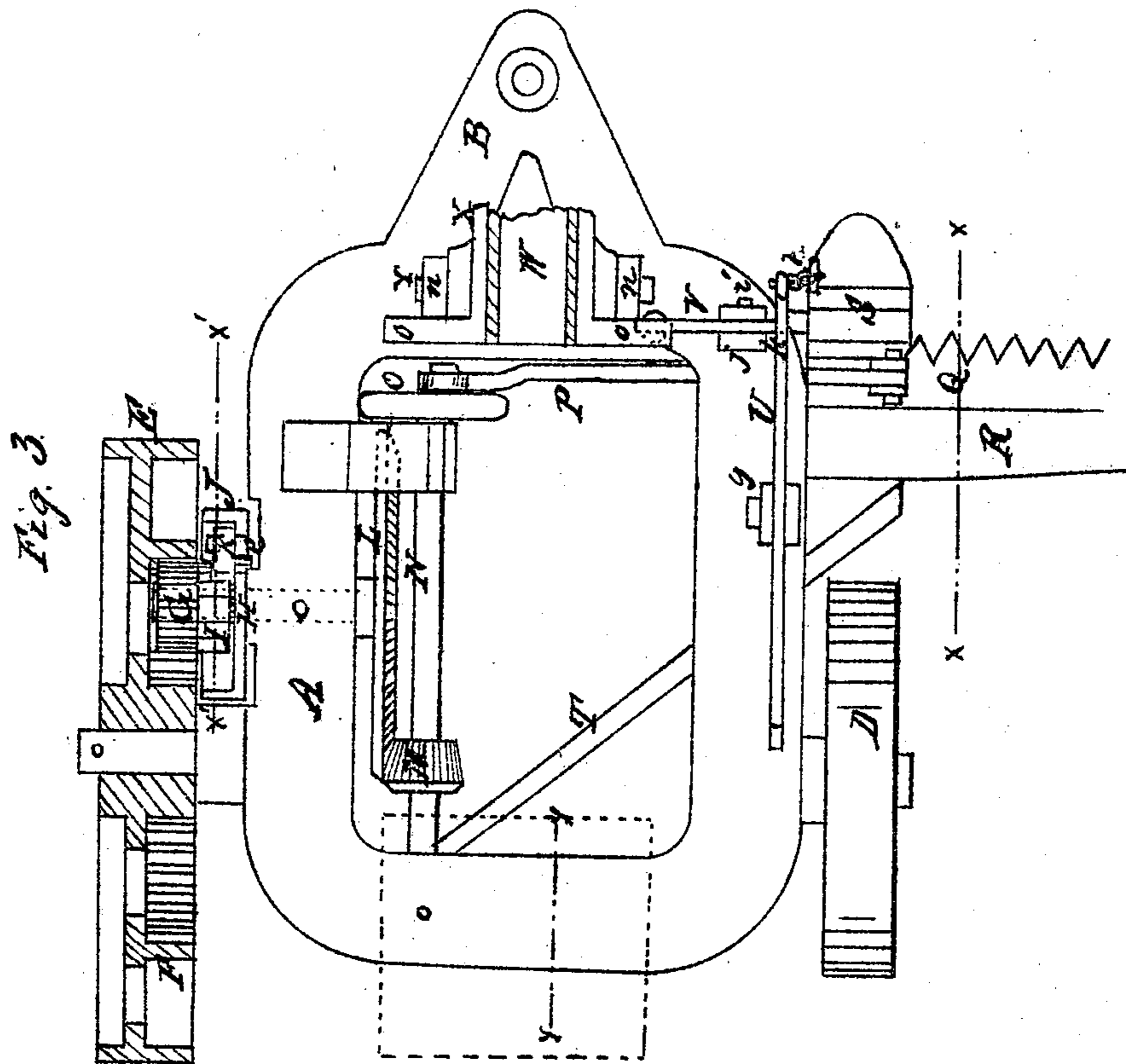
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UNITED STATES PATENT OFFICE.

JAMES W. SHIPMAN, OF SPRINGFIELD CENTRE, NEW YORK.

IMPROVEMENT IN MOWING-MACHINES.

Specification forming part of Letters Patent No. **29,325**, dated July 24, 1860.

To all whom it may concern:

Be it known that I, JAMES W. SHIPMAN, of Springfield Centre, in the county of Otsego and State of New York, have invented a new and Improved Mowing-Machine; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a side view of my invention, the sickle-bar being bisected as indicated by the line *x x*, Fig. 3; Fig. 2, a front view of the same; Fig. 3, a plan or top view of the same; Fig. 4, a section of a portion of the same, taken in the line *x' x'*, Fig. 3; Fig. 5, a transverse section of one side of the frame of the same, taken in the line *y y*, Fig. 1.

Similar letters of reference indicate corresponding parts in the several figures.

To enable others skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents the frame of the machine, which is of quadrilateral form, with rounded corners, as shown clearly in Fig. 3. This frame has a V-shaped projection, B, at its front end, and a caster-wheel, C, is secured to the front end of projection B, said wheel supporting the front part of the frame A. The back part of the frame is supported by two wheels, D E, the latter being the driving-wheel, or the one from which the sickle is driven. This wheel E has a toothed rim, F, attached to its inner side, and into this rim a pinion, G, gears, said pinion being placed loosely on a shaft, H, the bearing of which is at the under side of frame A, and cast with it. To the inner part of the pinion G there is a ratchet, I, attached, the ratchet and pinion being permanently connected or cast in one piece. The pinion G and ratchet I are encompassed by a drum, J, which is permanently attached to shaft H and concentrically with the pinion and ratchet. In the drum J there is secured a pawl, K, which has a spring, *a*, bearing against one end of it, said spring having a tendency to keep the pawl either engaged with or disengaged from the ratchet, according to the position of the former. When the pawl is engaged with the ratchet the tendency of the spring is to keep the pawl engaged with it, and the reverse is the case when the pawl is disengaged from the ratchet. This result is

due to the form of the inner end of the pawl, said end having two plane surfaces, *b c*, which form an obtuse angle with each other, and against which a plate, *d*, bears, said plate being acted upon by the spring *a*. This will be understood by referring to Fig. 4, in which the pawl is shown engaged with the ratchet in black and disengaged with it in red. The pawl K has a pin, *e*, attached to it, which pin passes through a curved slot, *f*, in the inner side of the drum J, and admits of the pawl being readily adjusted in or out of gear with the ratchet. When the pawl is engaged with the ratchet I the wheel F will rotate shaft H, the reverse being the case when the pawl is not engaged with the ratchet.

To the inner end of the shaft H a bevel-toothed wheel, L, is secured. This wheel gears into a bevel-pinion, M, on a shaft, N, placed longitudinally in the frame A and fitted in bearings underneath the frame. The front end of the shaft N has a crank-pulley, O, secured to it, said pulley having a rod, P, attached, which drives the sickles Q. The sickle Q is placed and works on a bar, R, the inner end of which is attached to a shoe, S, said shoe being secured to one end of rods T T, the opposite ends of which are fitted in the frame A, in bearings, so as to turn therein and admit of the lower ends of the rods rising and falling, and consequently the sickle Q.

On the frame A a bent lever, U, is placed, and secured by a fulcrum-pin, *g*. To the front end of the lower part of this lever U a chain, *p*, is attached, and the lower end of this chain is attached to the shoe S. On the front part of the frame A there is placed a dog, V, which is of bent form, as shown in Fig. 2, and works on a pin or pivot, *i*, in a proper bearing, *j*. The upright portion of this dog is notched, or has a shoulder, *k*, which catches underneath the lower part of the lever U when the latter is elevated, the shoulder *k* being made to pass underneath the lever by means of a spring, *l*, which is placed underneath the outer part of the lower portion of the dog, as shown clearly in Fig. 1. The front end of the lever U is shown in an elevated state in Fig. 1 and in a depressed state in Fig. 2.

The back end of the draft-pole W is fitted within a socket, X, which is of cast-iron, and formed of a bottom plate and two parallel sides, the back parts of which are provided

with eyes *m m*, through which and bearings *n n* on the frame a shaft or rod, *Y*, passes. This arrangement forms a joint connection of the socket *X* with the frame *A*, the socket being allowed to work freely on the shaft or rod. The back part of each side piece of the socket *X* has a stirrup, *o*, attached. These stirrups are simply lateral projections cast with the socket, and form bearings for the feet of the driver.

The frame *A* of the machine is of skeleton form—that is to say, it is formed of plates, as shown in Fig. 5, 1 1 being parallel side plates, and 2 a top plate. This form gives great strength with a small weight of metal. The frame is all cast in one piece, and but little labor is required in fitting the parts together. The wheels are of cast-iron. The shafting and rods are of wrought-iron, the sickle, of course, being steel.

The draft-pole *W* is secured in the socket

X by screws 3 3, which pass through the bottom of the socket into the draft-pole. This method of attaching the draft-pole to the frame forms a secure connection and admits of an independent movement of the frame and pole. The lever *U* and dog *V*, arranged as shown, admit of the sickle being very readily raised by the driver, the sickle being retained in an elevated state by the dog.

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

In combination with the ratchet *I*, pawl *K*, and drum *J*, the intermediate plate, *d*, and spring *a*, arranged and operated in the manner described, for the purpose specified.

JAMES W. SHIPMAN.

Witnesses:

SAMUEL J. WOOD,
HIRAM R. WOOD.