

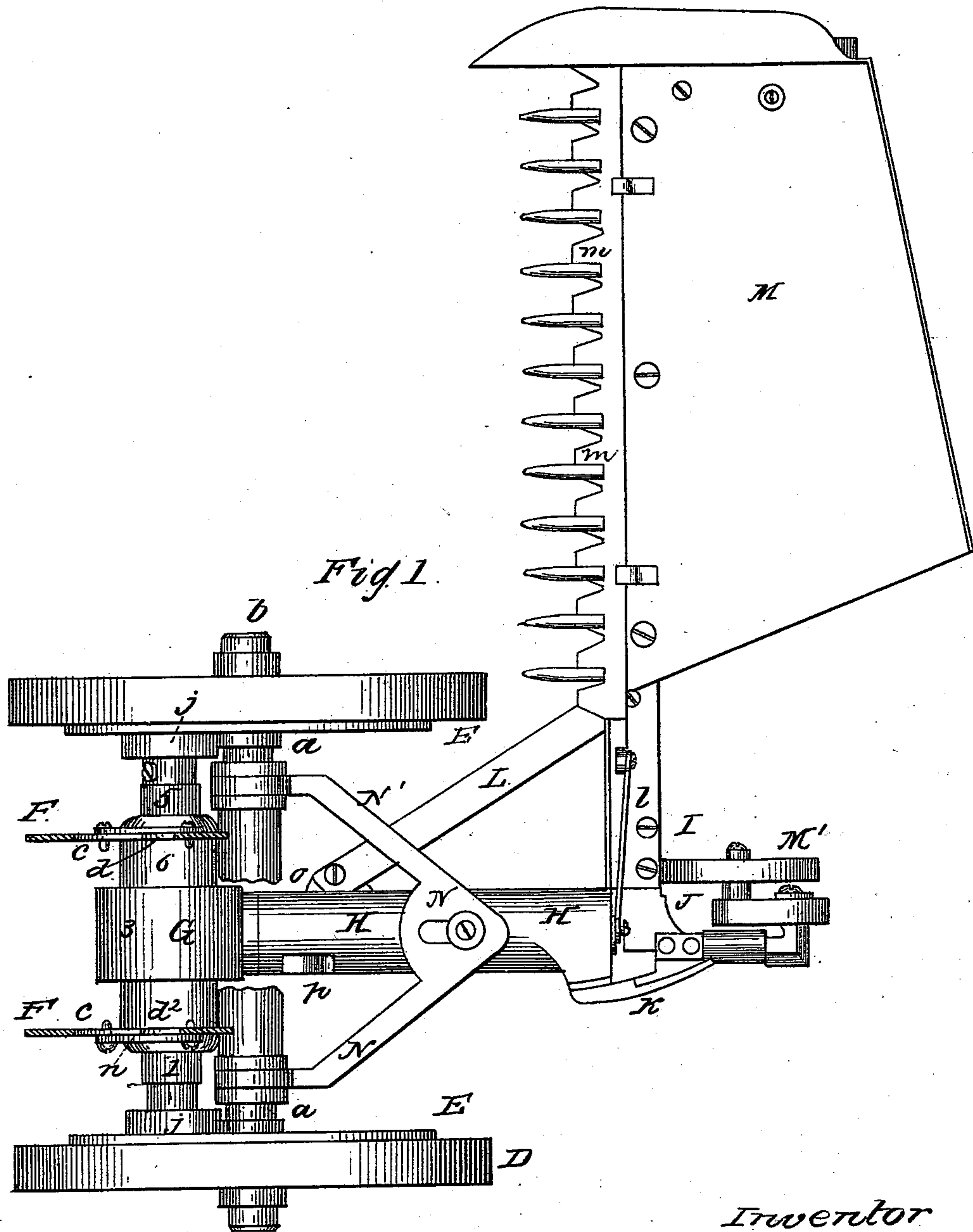
J. BUTTER.

Mower.

3 Sheets—Sheet 1.

No. 38,882.

Patented June 16, 1863.



Witnesses
John C. Jacobs
D. Dana Dodge

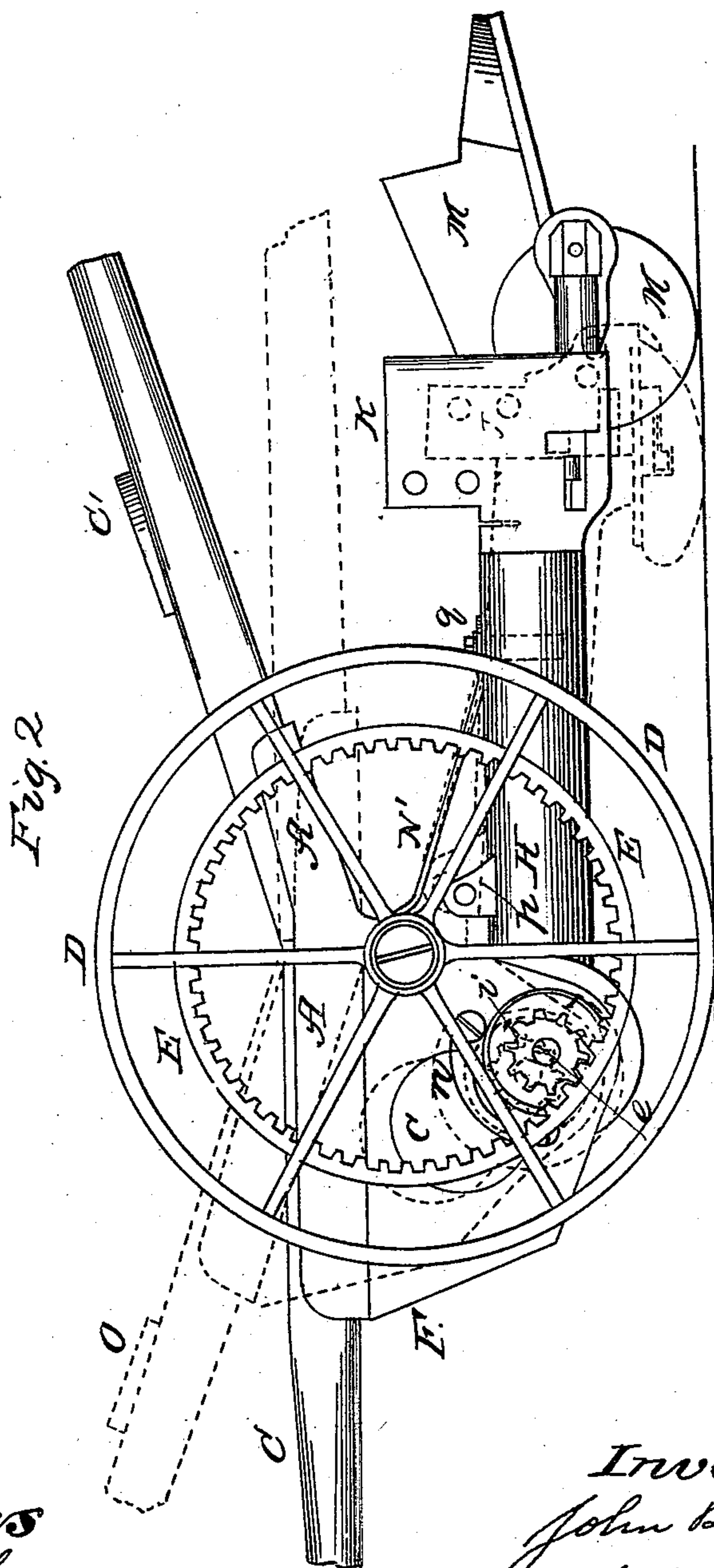
Inventor
John Butter
By his Attorney
Thos. H. Dodge

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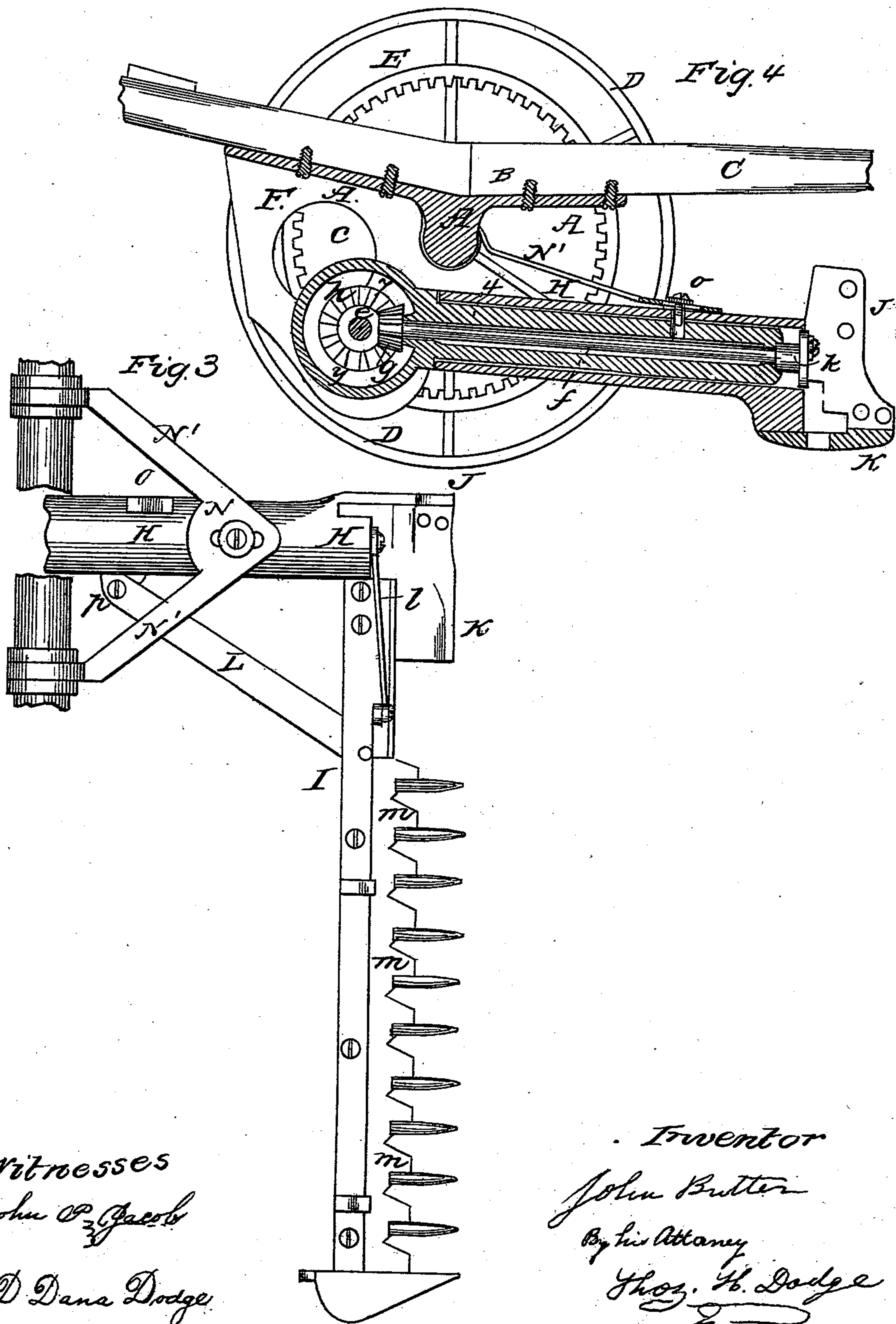
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3 Sheets—Sheet 3.

Mower.

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UNITED STATES PATENT OFFICE.

JOHN BUTLER, OF BUFFALO, NEW YORK.

IMPROVEMENT IN HARVESTERS.

Specification forming part of Letters Patent No. **38,882**, dated June 16, 1863; antedated May 5, 1863.

To all whom it may concern:

Be it known that I, JOHN BUTLER, of Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Combined Reaping and Mowing Machines; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 represents a plan view of my machine, a portion of the main frame and journal being broken away to show the form and position of the parts below the same. Fig. 2 represents in black lines a side view of the machine, looking in the direction of arrow 1, Fig. 1. Fig. 3 represents a plan view of the finger-bar and cutter and their supports when arranged for mowing and to operate with a "front cut;" and Fig. 4 is a central section, to show the crank-shaft, its gearing, and supports.

The main feature of this invention consists in the construction and combination of the parts in such a manner that the machine can be quickly adjusted to operate with a front or rear cut, just as may be desired, and that, too, either as a mower or reaper.

As a general rule, the rear-cutting machines are better adapted to reaping than those having a front cut, owing to the greater ease with which the grain is delivered in gavels at the rear of the machine and out of the way of the team on the next round. Many farmers, however, prefer a front-cutting machine for a mower. My invention enables me to use the same machine equally well in either case, and thus to meet the wishes of all.

In the drawings, A represents the main frame, and which is formed of cast metal. This frame A is formed with a long recess, B, on top, to receive the tongue or draft-beam C of the machine, to which the team is to be attached in any well-known manner. The outer ends, *a a*, of the frame A are left small, and are turned off to receive the main supporting and driving wheels D D, to the inside of which are fastened the gears E E. Wheels D D are held on by screw-bolts *b b*, screwed into the ends or journals *a a*.

To the under sides of the frame A are securely fastened two supporting-plates, F F,

each plate having an opening, *c c*, from the bottom of which descend narrow slots *d d*. Plates F F support the frame G, which is made of cast metal, the parts 1, 2, 3, and 4 being cast together, the parts 3 and 4 being hollow to receive crank-shaft *f* and its gear *g*, together with gear *h* on the shaft *e*, as indicated in Fig. 4. The parts 5 and 6 are also cast together, the latter being enlarged on its inner side, so as to fit closely the open end of 3, as seen at 7, Fig. 4, whereby when the parts are fitted together as seen in Fig. 1 they are as firm, for all practical purposes, as if the parts had all been cast in one piece. Frame G is provided with narrow grooves at the proper distance apart, and just wide enough to receive the plates F F. Each end of shaft *e*, which turns in frame G, is provided with a gear, *i*, and pawl-and-ratchet device, the case of which is seen at *j*, similar to what is generally employed in double-gear machines—as, for instance, in the mowing-machine of E. Ball, patented December 1, 1857, to E. Ball and John Butler, as the assignees of the said Ball; also in Walter A. Wood's mowing-machine, patented February, 1859. The gears *i i* take into gears E E, but are loose on the ends of shaft *e*, so that when the machine is backed the cutter is not operated. The parts *j* are, however, fast on the shaft, so that when the machine is drawn forward the cutter is operated similar to the double-gear machines above referred to. *k* is the crank and balance wheel, to which the pitman *l*, which operates the cutter *m*, is connected.

To put the machine together, crank-shaft *f* is passed into the interior of part 4 of frame G, and then its gear *g* is passed in through the open end of G and fastened upon the end of shaft *f*. Shaft *e* is then passed through frame G, so as to bring its gear *h* into mesh with gear *g*, when the part marked 5 and 6 is slipped on shaft *e*, slid into the open end of G, as seen at 7, Fig. 4, where it is fastened, so that the parts appear as in Fig. 1, the pawl and gear devices having been subsequently fitted and fastened on properly. Frame G is then dropped down so that its grooves will fit in the slots *d d* in the plates F F, when curved cap-pieces *n n* are screwed into the sides of the plates F F, thereby keeping the frame in place, although allowing the end which supports the finger-

beam and crank end of shaft *f* a free up-and-down motion, independent of the up-and-down motion of the frame A. H is a tubular finger-bar support, which fits over and turns on the part 4 of frame G, as clearly indicated in the drawings. The end to which the finger-beam I is fastened is formed with two shoes or heel-pieces, J and K, standing at nearly right angles to each other. When the machine is used with a rear cut, and as a reaper, then the finger-beam is attached to the shoe or heel piece J, as seen in Fig. 1, and in black lines, Fig. 2, and braced by a bar, L, one end of which is fastened to the lug *o* on the tubular part H, while the other end is fastened to the finger-beam near the first finger, as seen in Fig. 1, the platform M being supported at the proper height at one end by a small wheel, M', whose frame is fastened near the angle of the heel-pieces, as seen in Fig. 1, while a small wheel attached to a swivel-frame supports the outer end. The platform M and finger-bar I, together with the cutter, can rise or fall bodily, or at either end, without affecting the motion of the frame A.

In order to relieve the plates F F of undue strain a forked yielding brace, N, is employed. Its forked ends N' N' are fitted to and turn in grooves in the metal frame A, while the other end is slotted out, so as to allow guide-bolt *q*, which is fast in the part 4 of frame G, free play as the cutter and finger bar rise and fall, while at the same time serving as a brace to keep the part 4 of frame G in proper position laterally. The part H is slotted out for bolts *q*, as seen in red lines, Fig. 2, so as to give free motion to the finger-beam. In this case the team is to be hitched to a tongue, C, a section of which is shown in black lines, Fig. 2. Seats for the driver and raker are to be attached to the frame A in any desirable position. A frame to support the raker's seat might extend back, as seen at C', Fig. 2. A reel may also be employed.

When the machine is to be used as a mower with a front cut, then the platform is to be removed, the finger-beam detached, brace L removed, pitman disconnected, and the tubular part H turned over, so as to bring shoe or heel-piece K down upon the ground, and to which the finger-beam I is fastened, so as to occupy the position shown in Fig. 3, and in red lines, Fig. 2. Brace L is now fastened in rear of the finger-bar, as indicated, its rear end being secured to lug *p*, which is now turned down in a horizontal position. (See Fig. 3.) The same pitman answers in this latter case. Tongue C is now to be detached and fastened to the other end of frame A, so as to project as indicated in red lines, Fig. 2, frame A at the same time turning freely down, as indicated in red lines, same figure. A seat for the driver

can be fastened to frame A, as indicated at O in red lines, Fig. 2. In order to have the gearing operate properly, it will be necessary to turn frame G over, so as to change shaft *e* end for end; or the pawls and ratchets could be so arranged that they could be removed. When mowing, the wheel M' can be adjusted by fastening its frame to K, to support the heel of the finger-beam close down to the ground, and a small wheel can be used to support the outer end of the finger-beam.

It will thus be seen that by my invention the same finger-beam can be used for mowing or reaping, and that a front cut or rear cut can be had at pleasure, either for reaping or mowing, while the finger-beam and cutting apparatus are free to conform to the inequalities of the ground in both cases. Then, again, the construction of the machine is not only simple, but is of that character which renders the machine firm and durable. Of course, it will be understood that, when preferred, different finger-beams and cutter-bars can be used when reaping from those used in mowing.

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

1. Changing the gearing in a combined reaping and mowing machine, in the manner and for the purposes set forth.
2. The combination of the shoe which supports the heel of the finger-beam when the machine is used for a mower, with the yielding supports of the finger-beam with the main frame, in such a manner as that by simply turning said shoe one-quarter over the finger-beam can be attached to the same shoe-piece for reaping, and the same connecting-rod used, while the finger-beam is left free to rise and fall, substantially as described.
3. The tubular part H, in combination with the finger-beam supports J and K, arranged in relation to each other, for the purposes stated.
4. The combination of the finger-beam I and brace L with the tubular part H and its lugs *o* and *p*, substantially as and for the purposes set forth.
5. The frame G, as a support for shafts *f* and *e*, substantially as set forth.
6. Frame G, in combination with the supporting-plates F F, substantially as set forth.
7. The combination of the yielding slotted brace N with frame G, substantially as set forth.

In witness whereof I have hereunto subscribed my name.

JOHN BUTLER.

Witnesses:

E. B. FORBUSH,
LEWIS BOORE.