A. Smith.
Mower.

'1423.

Patented Aug. 25. 1868.

Fig. 1.

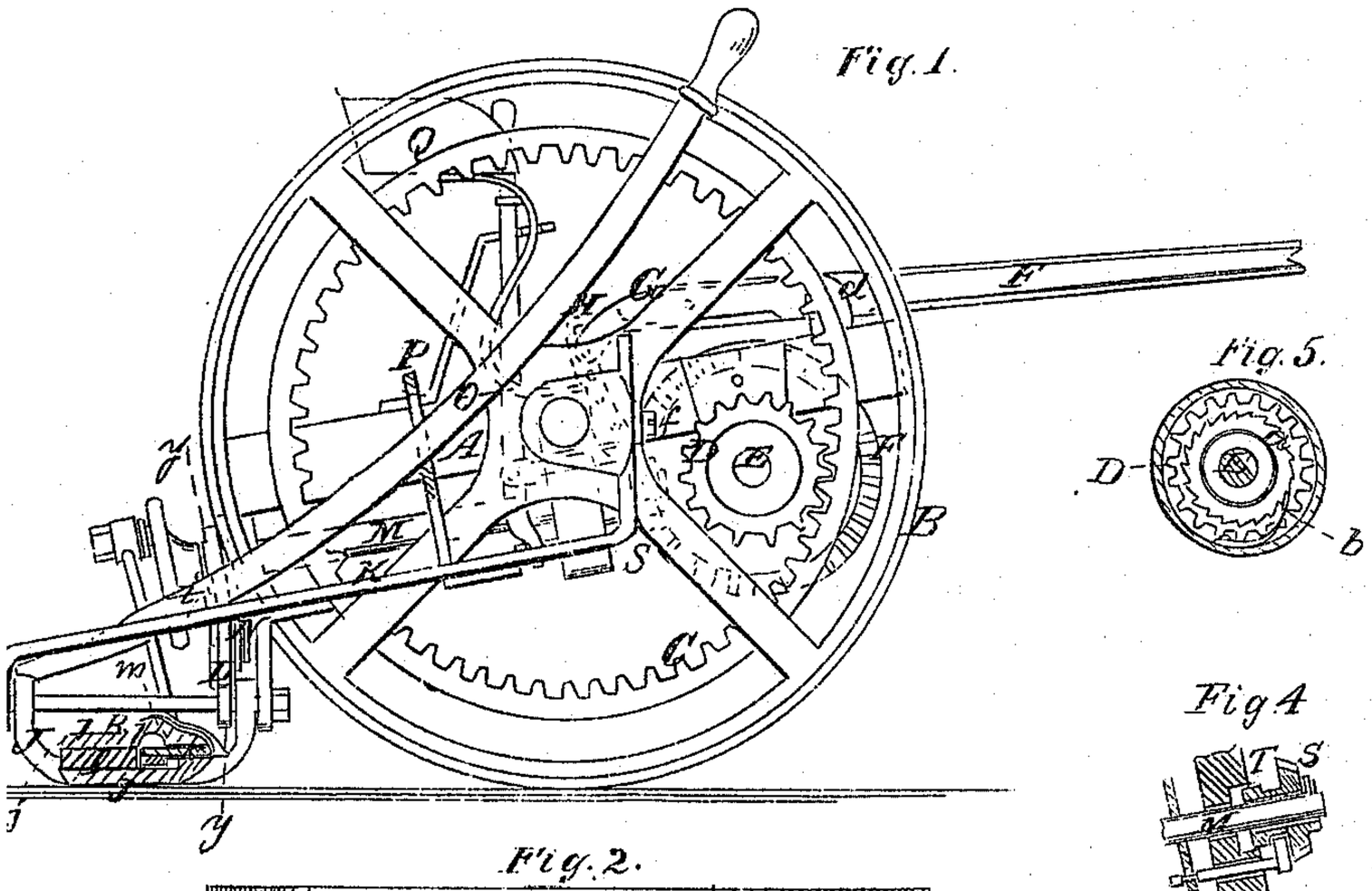
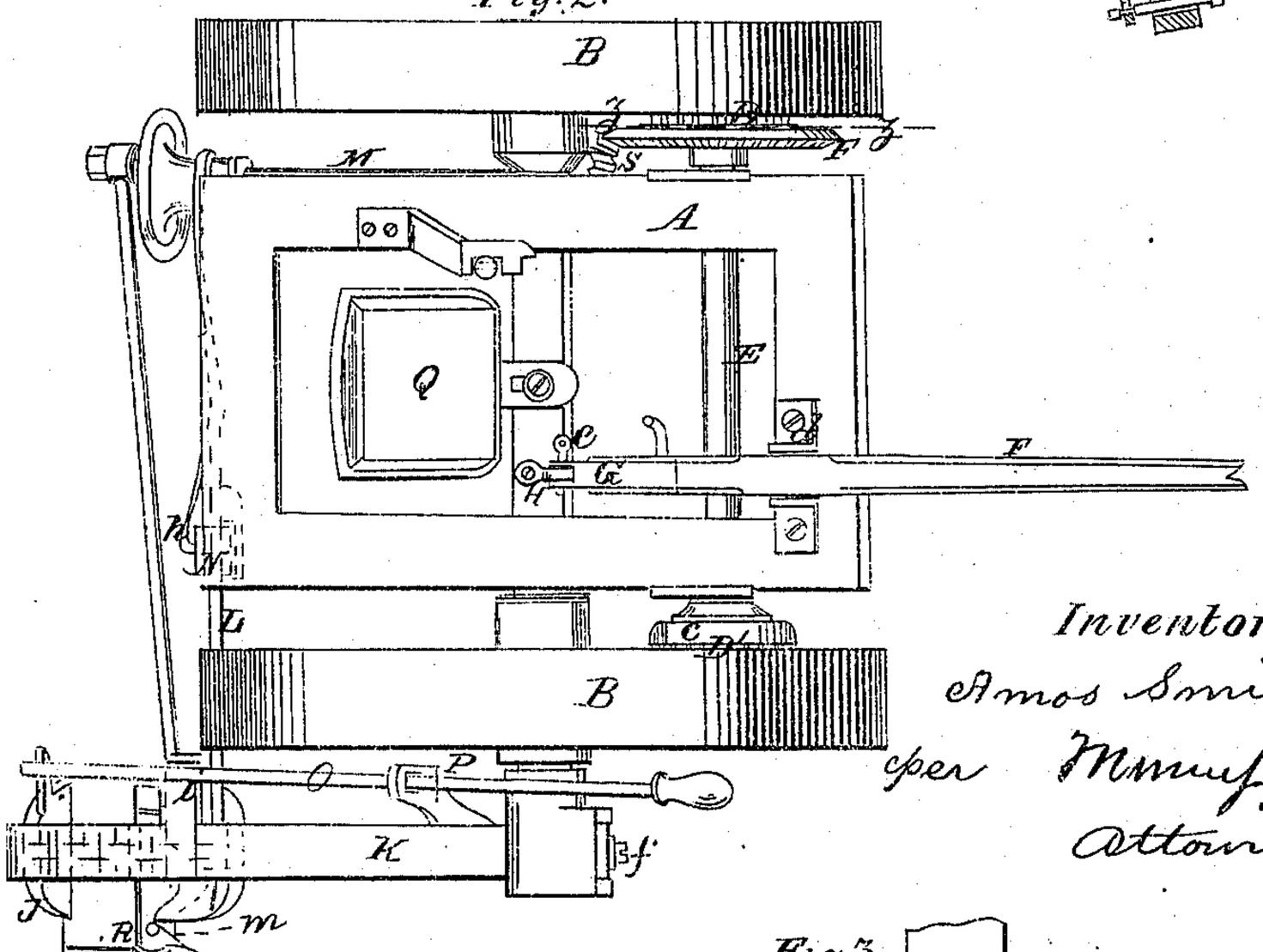


Fig. 5.

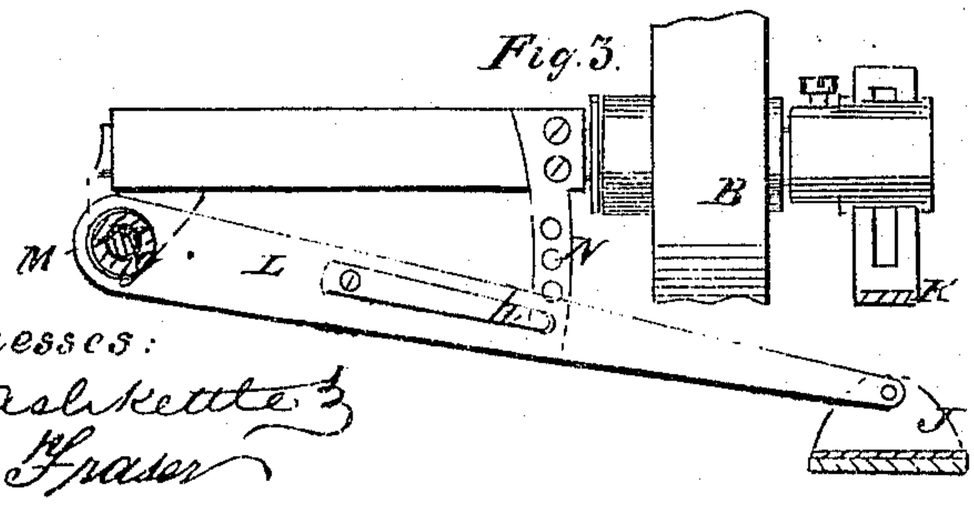
Fig 4

Fig. 2.



Inventor:
Amos Smith
per Munn & Co
Attorneys

Fig. 3.



Witnesses:
H. C. Ashcroft Jr.
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UNITED STATES PATENT OFFICE.

AMOS SMITH, OF VIENNA CROSS ROADS, OHIO.

IMPROVEMENT IN HARVESTERS.

Specification forming part of Letters Patent No. **81,423**, dated August 25, 1868.

To all whom it may concern:

Be it known that I, AMOS SMITH, of Vienna Cross Roads, in the county of Clarke and State of Ohio, have invented a new and useful Improvement in Grain and Grass Harvesters; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to certain new and useful improvements in grain and grass harvesters.

In the accompanying sheet of drawings, Figure 1 is a side view of my invention, taken in the line *x x*, Fig. 2; Fig. 2, a plan or top view of the same; Fig. 3, a section of the same, taken in the line *y y*, Fig. 1; Fig. 4, a longitudinal section of the pinion and clutch on the pitman-shaft; Fig. 5, a section taken in the line *z z*, Fig. 2.

Similar letters of reference indicate corresponding parts.

A represents the main frame of the harvester, which is supported by two wheels, B B, each of which has a concentric toothed rim, C, attached, into which pinions D D′ gear, the rims C being at their inner sides, as shown clearly in Fig. 1. The pinions D D′ are placed loosely on a shaft, E, one pinion, D, having a ratchet, *a*, at one side, which works in a circular recess in the outer side of a bevel-wheel, F, which is firmly keyed on the shaft E at the outer side of main frame, and engages with a pawl, *b*, in said recess when the machine is drawn forward, so as to give motion to the shaft E, said pinion, when the machine is backed, not rotating the shaft E. This will be fully understood by referring to Fig. 5. The other pinion, D′, is arranged in a similar way, but has its ratchet fitted in a shoulder, *c*, on shaft E, said shoulder having a pawl fitted within it. By this arrangement the sickle-driving mechanism is rendered operative when the machine is drawn forward. F represents the draft-pole of the machine, which is secured to the front part of the main frame A by a joint or hinge, *d*, and to the rear end of the draft-pole there is attached a metallic socket, G, which is slotted longitudinally, and is fitted and works on a fixed perforated guide-plate, H, attached to the front side of the axle of the machine. By this arrangement the rear end of the frame A may be depressed at any time by pressing down with the foot on the rear end of the draft-pole. The draft-pole may be secured in a fixed position at any time by having a pin, *e*, through the socket G and plate H. I represents the finger-bar, the inner end of which is attached to a shoe, J, the latter being attached by a joint to a bar, K, the front end of which is bent upward, and has an oblong slot made in it, through which a set-screw, *f*, passes into the axle. L is a bar, which is fitted on the crank-box *g* at the rear end of the pitman-shaft M. The outer end of the bar L is connected to the shoe J, and said bar L has a spring-catch, *h*, attached to it, which engages with any of a series of holes made in a pendent bar, N, at the rear of frame A. (See Fig. 3.) By this arrangement the finger-bar may be adjusted higher or lower, as desired, and by means which are entirely at the outer side of the main frame and driving-wheel at the right-hand side of the machine. O represents a hand-lever, which has its fulcrum *i* on the bar K, and has its rear end bearing on a projection on the rear of the shoe J at the inner side of the joint which connects the shoe to bar L. This lever O extends through a slot in a guide-plate, P, attached to bar K, and passes upward within convenient reach of the driver on his seat Q, so that by drawing the lever back the outer end finger-bar will be raised. R represents the guards or fingers, part being secured to the upper surface of the finger-bar I, and the other part to the lower which are made of two pieces or parts, *j j*, one surface. These parts extend outward in front of the finger-bar as far as the knives *k*, and no farther. (See Fig. 1.) The upper parts *j* of the guards or fingers are formed with recesses *l*, to admit of cones or projections *m* on the knives working through, said cones or projections serving to clear the cut grass from within the guards or fingers, and prevent the choking or clogging of the same. These cones or projections are placed at the roots of the knives, as shown clearly in Fig. 2. The bevel-wheel F gears into a bevel-pinion, S, on the pitman-shaft M, the pinion S being connected with shaft M by a clutch, T, as shown in Fig. 4, to admit of said pinion being disconnected

from the shaft M when it is required to render the sickle inoperative during a forward movement of the machine.

I claim as new and desire to secure by Letters Patent—

The arrangement of the bars K L, at the junction of which the cutter-bar is pivoted, upon the outer end of the axle of the machine and the bearing of the pitman-shaft, respectively, when said bars are adjustable, as described, and the bar K, provided with the pivot *i* of the lever O, and the slotted standard P, for raising the outer end of the cutter-bar, all constructed, arranged, and operating substantially as set forth.

AMOS SMITH.

Witnesses:
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