J. F. BARRETT.

Mower.

No. 13,205. Patented July 10, 1855.

Fig: 1.

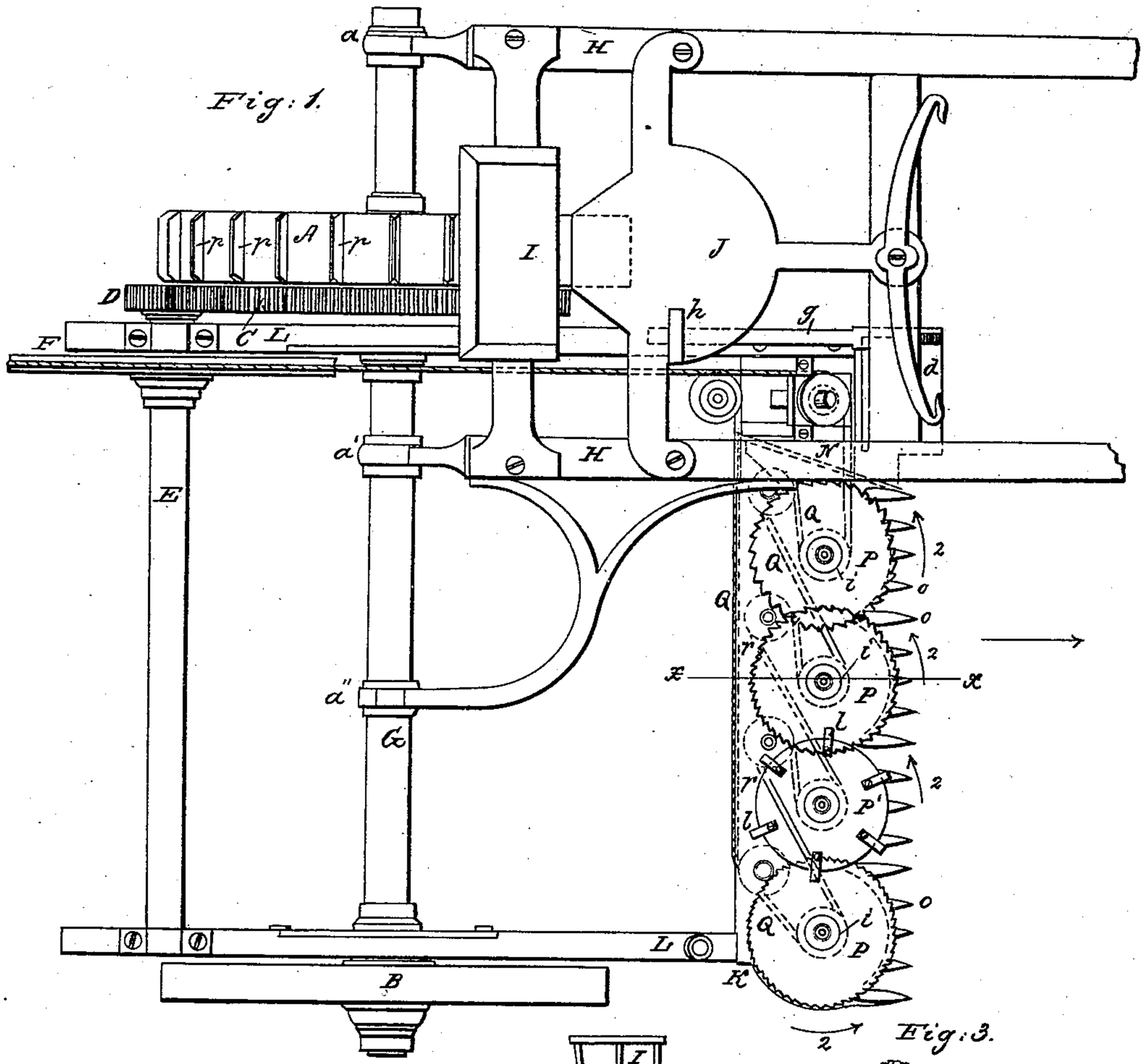

Fig: 3.

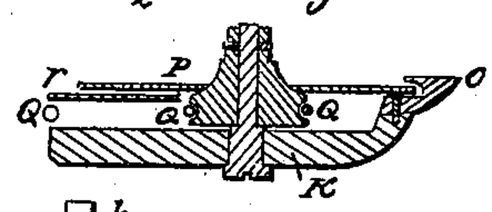

Fig: 2.

UNITED STATES PATENT OFFICE.

JONA. F. BARRETT, OF NORTH GRANVILLE, NEW YORK.

IMPROVED METHOD OF RAISING AND LOWERING THE CUTTERS OF HARVESTERS.

Specification forming part of Letters Patent No. **13,205**, dated July 10, 1855.

To all whom it may concern:

Be it known that I, JONATHAN F. BARRETT, of North Granville, in the county of Washington and State of New York, have invented a new and useful Improvement in 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 annexed drawings, forming part of this specification, in which—

Figure 1 is a plan of machine. Fig. 2 is a side elevation. Fig. 3 is a vertical section on *x x*.

Similar characters of reference in the several figures denote the same parts of the machine.

The nature of my invention consists in connecting the front of the frame or cutter-bar with a lever beneath the shafts, said lever being so arranged and operated as to render the foot of the driver effective for elevating the cutters for passing obstacles and other purposes, as will be fully set forth.

In the drawings the several parts are represented as follows: A B, main driving-wheels; C, cogged rim on wheel A, meshing with pinion D; D, pinion on shaft E, giving motion to band-wheel F on same shaft; G, main axle, about which the frame of the machine and the thills are movable; H H, thills connected with axle G by eyes *a a' a''*, so as to be capable of moving about said axle; I, driver's seat, supported by thills; J, foot-board of same; K, cutter-guard bed secured to the forward extremities of cheeks L of frame, and thus constituting the forward portion of the said frame, the shaft E forming the rear of same; M, lever hung beneath thills and movable about its fulcrum *b*, its forward arm connected by chain *c* with the upper portion of shoe *d*, and its rear arm attached by joint *e* to the rod *f*. This rod passes through the bar *g* and foot-board J, and has on its upper extremity a cross-piece, *h*, for the reception of the driver's foot; N, vertical side guard; O, slotted guard-teeth secured to the front edge of bed K, the teeth being of unequal lengths to admit of the curvature of the said bed and allow the points of the teeth to lie in the same right line; P P', rotary cutters secured to pulleys *i* and revolved by band Q, leading, as shown in Fig. 1, from wheel F, the connection of the pulleys *i* with the bed K being as set forth in Fig. 3. These cutters are armed with teeth of any required size and form; or they may be composed of metallic disks P', with cutting or sickle edged knives *l* radiating at suitable intervals from the circumference. The teeth of the saws project slightly in front of the guard-bed K, and pass through the slots of the guard-teeth O.

The operation of the machine is as follows: The machine is driven forward in the usual manner, the projections *p* on the wheel A insuring the rotation of band-wheel F, as indicated by arrow 1, producing through band Q the revolution of each of the series of cutters P P', as indicated by arrows 2. The great velocity of this revolution of the saws effectually cuts the grass with which the cutters come in contact, the mown grass passing off in rear over the plate *r*. During the operation of the machine the front portion of the frame rests upon the shoe *d*, and thus glides over the surface of the ground. Should the driver, however, wish to pass over an obstacle or stop the operation of the cutters during any portion of the travel of the machine, he slightly presses with his foot upon the cross-piece *h* of rod *f*, elevating the front arm of the lever M and lifting the front portion of the frame from the ground. The frame is so adjusted as to be easily turned about the main axle, a weight being attached to the rear portion, if it be necessary. The removal of the foot permits the descent of the bed K, and the operation proceeds as before.

In arranging the saws upon the bed they are made to overlap, as shown in Fig. 1, in order to diminish as much as possible the depth of the re-entrant angles formed by tangents to their circumferences, and cause the acting portions of the whole series to approximate to a right line, thus giving the entire system a combined action resembling what would be produced by an endless cutter moving with great velocity over a stationary bed and through the slots of guard-teeth.

In forming the saw-teeth I do not restrict myself to any particular size or form of tooth, the cutting-edges being, moreover, sharp or sickle, as may be deemed advisable. Neither do I restrict myself to the precise mode of attaching and driving the saws, nor to the number of saws here shown, as these details may be varied in many particulars without changing the nature of my invention.

The machine herein described being designed

for mowing purposes, I would state that the same construction, with slight modifications, is equally applicable to the harvesting of grain, and such modifications I claim the right to make.

The great advantage of this machine arises from the velocity of the series of saws constituting the cutting apparatus, rendering it far more effective than either the reciprocating or endless cutter. The simplicity of the contrivance by which the driver is enabled to control the position of the cutters is also of great importance in machines of this character.

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

Connecting the front of the frame with a lever, M, arranged and operated, substantially as set forth, for effecting the elevation of the cutters for the passage of obstacles by the driver's foot, as specified.

In testimony whereof I have hereunto signed my name before two subscribing witnesses.

JONATHAN F. BARRETT.

Witnesses:
GEO. PATTEN,
JAS. D. CLARY.