

No. 666,055.

Patented Jan. 15, 1901.

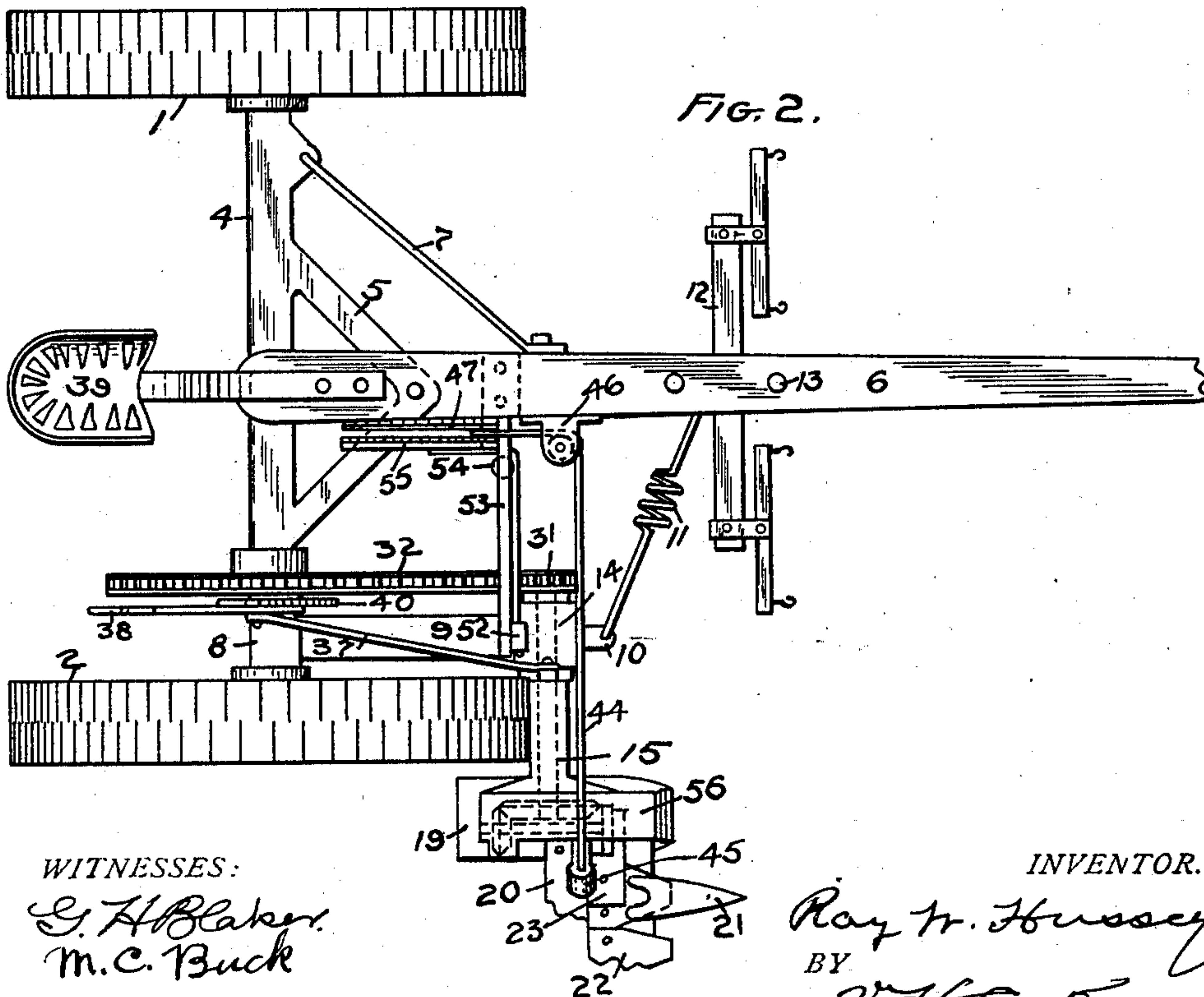
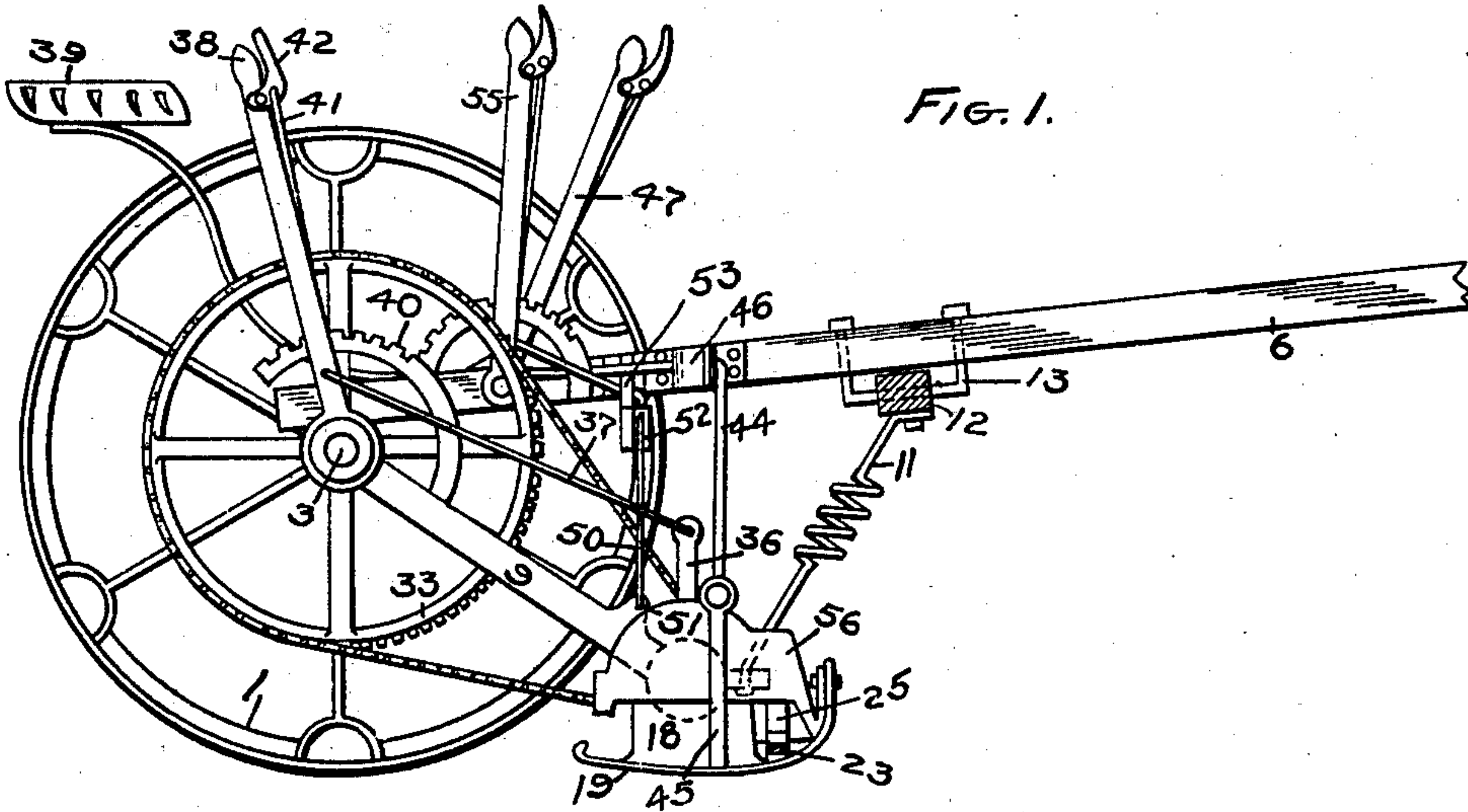
R. W. HUSSEY.

MACHINE FOR CUTTING GRASS, GRAIN, &c.

(Application filed Feb. 28, 1900.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES:

G. H. Baker.
M. C. Buck

INVENTOR.

Ray W. Hussey,
BY
V. H. Lockwood
His ATTORNEY.

No. 666,055.

Patented Jan. 15, 1901.

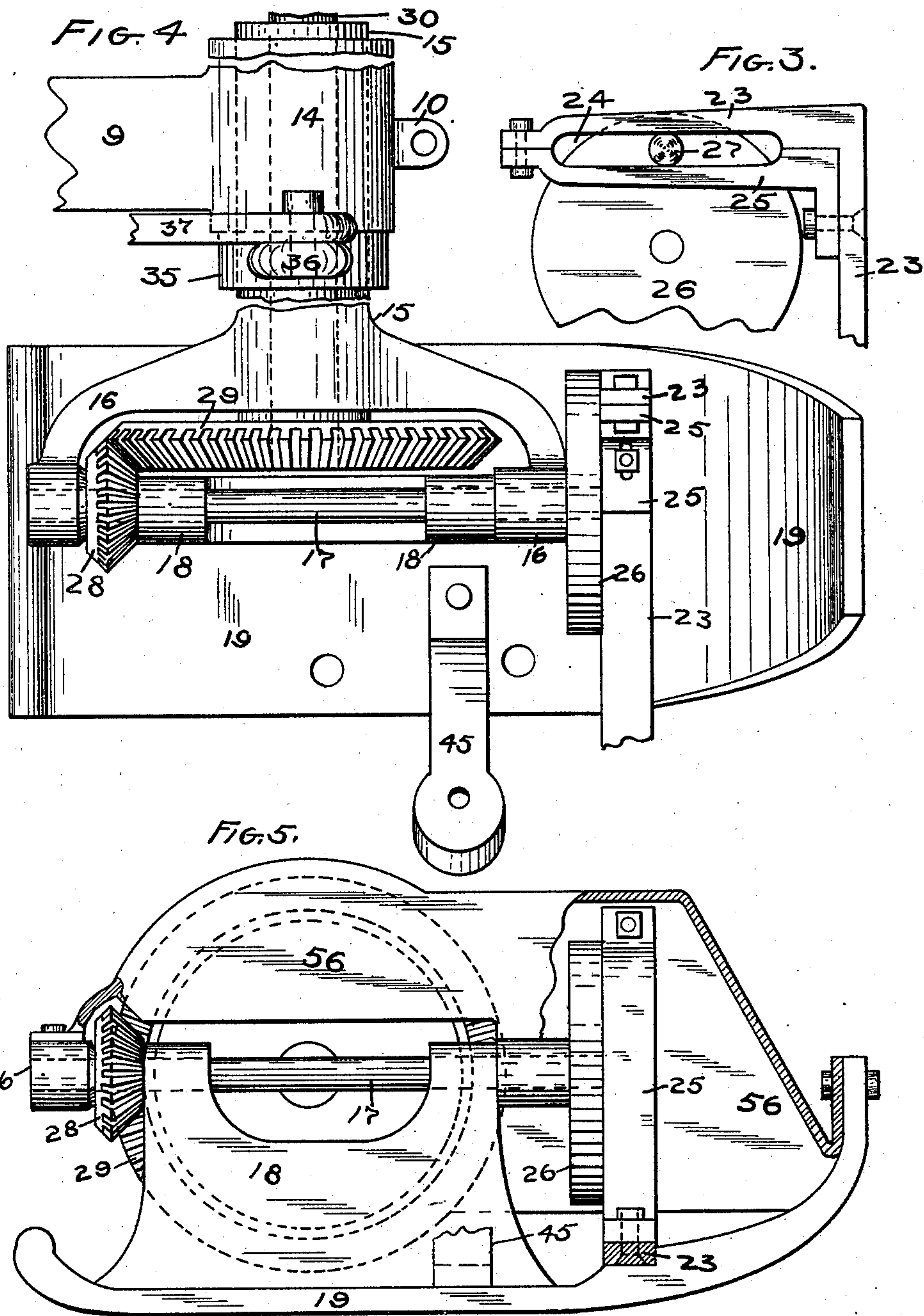
R. W. HUSSEY.

MACHINE FOR CUTTING GRASS, GRAIN, &c.

(Application filed Feb. 26, 1900.)

(No Model.)

2 Sheets—Sheet 2.



WITNESSES:

G. H. Baker.
M. C. Buck.

INVENTOR.

Ray H. Hussey.

BY

V. H. Lockwood
His ATTORNEY.

UNITED STATES PATENT OFFICE.

RAY W. HUSSEY, OF PENDLETON, INDIANA.

MACHINE FOR CUTTING GRASS, GRAIN, &c.

SPECIFICATION forming part of Letters Patent No. 666,055, dated January 15, 1901.

Application filed February 26, 1900. Serial No. 6,530. (No model.)

To all whom it may concern:

Be it known that I, RAY W. HUSSEY, of Pendleton, county of Madison, and State of Indiana, have invented a certain new and useful Machine for Cutting Grass, Grain, &c.; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which like numerals refer to like parts.

10 The features of my invention will appear from the accompanying drawings and the description following of one form of device embodying my said invention, and the scope of the invention will be understood from the

15 claims following said description.

In the drawings of the machine to illustrate this invention, Figure 1 is a side elevation of the machine with the finger-bar and driving-wheel next to it detached. Fig. 2 is a plan

20 of the mower with part of the tongue and knife-bar broken away and provided with my invention. Fig. 3 is an elevation of the driven end of the knife and the means for driving it, parts being broken away. Fig. 4 is a plan

25 of the shoe and rocking and folding mechanism, parts being broken away, with the housing removed. Fig. 5 is a side elevation of what is shown in Fig. 4 with a part of the housing broken away.

30 To illustrate the general nature of my invention, I have shown in the accompanying drawings a pair of driving-wheels 1 and 2, mounted on a suitable shaft 3 and connected with said shaft by any well-known means,

35 such as a ratchet connection for transmitting motion to the driving-shaft, but the details of this are not shown, as my invention does not relate to it. On said shaft 3 I place a frame 4, consisting of a tubular casting having a V-shaped forward extension 5. The

40 tongue 6 is secured to the casting 4 and also to the point of the extension 5. A brace-rod 7 extends from near the end of the casting 4 to the side of the tongue 6. A secondary frame is also provided, consisting of the casting 8, surrounding the shaft 3, and the arm

45 9 extending forward. From an extension 10 on said arm 9 I extend a spring brace-rod 11 to the doubletrees 12. The doubletrees are

50 slidingly mounted on a support 13, that is secured to the tongue on the under side, as shown in Fig. 1. Said arm 9 has a bearing

14 to be seen in Figs. 2 and 4 and in dotted lines in Fig. 1. Through said bearing there extends a tubular shaft 15, having on its outer

55 end a pair of oppositely-extending arms 16, in which the crank-shaft 17 is loosely mounted at a right angle to the tubular shaft 15. Said crank-shaft 17 is also loosely mounted in a pair of posts 18, extending up from and

60 secured to the shoe 19. The finger-bar 20 is rigidly secured to said shoe and has the guards 21. The knife 22 is mounted on the knife-bar 23 in the usual manner. The inner end of the knife-bar 23 is provided with

65 an upwardly-extending arm, as shown in Fig. 3, with a vertical slot 24 in it. In the form shown said slot is formed by combining with the upturned end of the knife-bar 23 an auxiliary bar 25, secured at its two ends to the

70 bar 23, but it may be otherwise constructed so long as it has the form or function of a slot. On the end of the crank-shaft 17, adjacent to the knife-bar, I secure a disk 26, having a wrist-pin 27, that operates in said

75 slot 24.

The crank-shaft 17 is driven by the bevel-pinion 28, rigidly secured to it, which meshes at all times with the bevel-gear 29, mounted on the shaft 30, that extends through and has

80 its bearing in the tubular shaft 15. This shaft 30 on its other end has a small sprocket-wheel 31, that is driven by the sprocket-chain 32, running over a large sprocket-wheel mounted on the end of the casting 4 and sur-

85 rounding the shaft and connected up with the shaft in any suitable manner to enable the shaft to transmit power to said sprocket-wheel and to enable the sprocket-wheel to be thrown into and out of gear. The details of

90 the connection between the sprocket-wheel and the driving-shaft 3 are not shown, as the same is familiar to those skilled in the art, and any old and well-known means may be employed, as it forms no part of my inven-

95 tion. The axes of shafts 17 and 30 intersect at a right angle.

In order to rock the finger-bar, I secure the collar 35 on the tubular shaft 15, adjacent to the arm 9. It has an upwardly-extending arm 36, to whose upper end the link 37

100 is pivoted, with its other end pivoted in the hand-lever 38, which is mounted on the casting 8 and extends upward within reach of

the driver while occupying the seat 39. A suitably-curved rack 40 is secured on the casting 8, whose teeth are engaged by the lower end of the rod 41, which is operated by the small handpiece 42, pivoted to the lever 38. The means for locking the lever 38 into any position are of the ordinary kind and constitute no part of this invention so far as their particular construction is concerned; but the function of the lever 38, link 37, and arm 36 is to cause the tubular shaft 15 to be oscillated in the bearing 14, and thus to rock the shoe 19 and the finger-bar, so as to elevate or lower the guards and knife when desired. It is observed that such oscillation also causes the oscillation of the arms 16 and crank-shaft 17; but since the oscillatory movement of all these parts has the same axis as the shaft 30, which carries the gear 29, the pinion 28 will continue in working engagement with the gear 29, regardless of how much the finger-bar is rocked. The connection between the crank-shaft 17 and the knife-bar is also such as to permit actuation of the knife, regardless of the rocking of the finger-bar and other parts.

The finger-bar is folded by the cable 44, that is connected at one end to the post 45, secured to the shoe 19 at a slight angle from the vertical position, said cable extending about a pulley. (Shown in dotted lines in Fig. 2 as mounted in a bracket 46, secured to the side of the tongue.) The cable is extended to connect with the hand-lever 47, which is mounted beside the tongue and has means for locking it in position. When said lever 47 is drawn backward, it will fold the finger-bar to any angle or up to a vertical position. In any position of the finger-bar the knife may be driven, because the pivotal point of the finger-bar has for its axis the axis of the crank-shaft 17, and therefore the relation between the bevel-pinion 28 and the bevel-gear 29 is not altered. This is useful in lifting the outer end of the finger-bar over obstructions and yet permit the knife to continue operation. With the old pitman-rod construction such partial folding of the finger-bar, even to a slight extent, practically prevented operation of the knife and when folded to a considerable extent or vertical position such actuation was impossible, as the end of the pitman-rod would engage the finger-bar or shoe and act at a right angle to the finger-bar. In order to lift the shoe, and therefore the finger-bar, entirely off the ground, whether while cutting grain or not, I provide the cable 50, that is secured at one end to a lug 51 on the arm 9 near its front end and runs upward vertically over a pulley in a bracket 52, secured on the outer end of a bar 53, that is secured to the tongue on the under side, as is shown by dotted lines in Fig. 2. This bar 53 extends at a right angle to the tongue in a horizontal direction, with its outer end directly over the arm 9. The cable therefore extends over the horizontal pulley 54 to the hand-lever 55, that is pivoted at its lower

end to the side of the tongue and is provided with means for locking it in any position. The shoe 19 and parts mounted thereon are covered and protected by a suitable housing 56. This means for driving the finger-bar and mounting it so that it can be rocked or folded and yet permit the machine to drive the knife can be applied to any kind of mowing-machine and in front of the driving-wheel or behind the same, as may be desired. It is obvious, therefore, that in this machine the knife will operate with the finger-bar either folded or rocked and that it can perform a great many kinds of work that the mowing-machines heretofore in use were incapable of performing. For illustration, the side of a hedge can be trimmed with this machine with the finger-bar either vertical or at any desired angle. You can adjust the finger-bar to suit whatever work desired without interfering with the operation of the knife.

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

1. In a machine of the class described, the combination with a main frame, and a tongue secured thereto, of a secondary frame mounted adjacent to the main frame and capable of vertical movement, said secondary frame comprising a forwardly-extending arm hingedly connected to the driving-shaft of the machine and provided at its forward extremity with a bearing, cutting mechanism carried by said secondary frame, a shaft journaled in said bearing for operating said mechanism, suitable connections between said shaft and the driving-shaft of the machine for operating the former, a bar carried by said tongue and projecting at right angles thereto and over the secondary frame, pulleys carried by said bar, a cable passing around said pulleys and connected to the secondary frame, whereby the latter may be raised for elevating the cutting mechanism, and a hand-lever connected to said cable for operating the same.

2. In a machine of the class described, the combination with a main frame, and a tongue secured thereto, of a secondary frame mounted adjacent to the main frame and capable of vertical movement, said secondary frame comprising a forwardly-extending arm hingedly connected to the driving shaft of the machine and provided at its forward extremity with a bearing, cutting mechanism carried by said secondary frame, a shaft journaled in said bearing for operating said mechanism, suitable connections between said shaft and the driving-shaft of the machine for operating the former, a bar carried by said tongue and projecting at right angles thereto and over the secondary frame, pulleys carried by said bar, a cable passing around said pulleys and connected to the secondary frame, whereby the latter may be raised for elevating the cutting mechanism, a hand-lever connected to said cable for operating the same, and a spring brace-rod connected to the secondary frame and also slidably connected to the tongue.

3. In a machine of the class described, the combination with a main frame, and a tongue secured thereto, of a secondary frame mounted adjacent to the main frame and capable of vertical movement, said secondary frame comprising a forwardly-extending arm hingedly connected to the driving-shaft of the machine and provided at its forward extremity with a bearing, a tubular shaft journaled in said bearing and provided with divergent arms, a shaft journaled in said tubular shaft and suitably connected to the driving-shaft of the machine, a crank-shaft journaled in said arms and lying at right angles to the shaft journaled in said tubular shaft, beveled gears carried by said shafts and meshing with each other, cutting mechanism operatively con-

nected to the crank-shaft, a bar carried by the tongue and projecting at right angles thereto and over the secondary frame, pulleys carried by said bar, a cable passing around said pulleys and connected to the secondary frame, whereby the latter may be raised for elevating the cutting mechanism, and a handle lever connected to said cable for operating the same.

In witness whereof I have hereunto affixed my signature in the presence of the witnesses herein named.

RAY W. HUSSEY.

Witnesses:

M. C. BUCK,

V. H. LOCKWOOD.