

Mower.

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Fig. 1.

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IMPROVEMENT IN MOWING-MACHINES.

Specification forming part of Letters Patent No. 46,566, dated February 28, 1865.

To all whom it may concern:

Be it known that I, JOHN JANN, of New Windsor, in the county of Carroll and State of Maryland, have invented certain new and useful Improvements in Mowing-Machines; and I do hereby declare the following to be a full and exact description of the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a side elevation of my improved machine. Fig. 2 is a horizontal section of the same in the line *x x*.

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

The principal object of this invention is to obtain a main frame which may be made much more small and compact than the ordinary frame, provide for the employment of the most simple gearing, and effectually protect the latter from dust, moisture, and inclement weather. A further object is to produce improved and simplified mechanism for operating the sickle and connecting the finger-beam to the body of the machine.

In order that others skilled in the art to which my invention appertains may be enabled to fully understand and use the same, I will proceed to describe its construction and operation.

In the accompanying drawings, A A' represent a hollow metallic frame mounted upon wheels B B; C, the tongue, and *a a* the tongue-socket. The frame is composed of two sections, which are indicated, respectively, by the letters A A'. These sections are cast separately and secured together, in the manner shown, by screw-bolts *a'* and nuts *a''*, the contiguous surfaces of the two parts of the frame fitting snugly against each other, so as to form a tight joint for the purpose of excluding from the interior any water or other matter which might impair the parts located therein. It will be seen that a frame thus constructed has somewhat the appearance of a flat elongated box, the narrow sides forming the top and bottom of said frame. As it is made of metal, a small amount of the latter will serve to give it the requisite weight and strength, and hence it may be constructed cheaply as well as compactly.

D is the driver's seat, supported above the front end of the frame or box by a frame, D', the several parts of which are secured to the

said box by means of two of the bolts which serve to fasten together the sections A A'.

The wheels B B are journaled loosely on the axle B', and operate, in connection with a ratchet-wheel, E, and spring-pawl *e*, in customary manner, in order that the axle B may be rotated and the working mechanism put in motion only when the machine is moving forward. On each section A A' is formed a cylindrical box, *b*, which, together with annular washers *b' b'*, serve to cover the parts of the axle B' between the wheel-hubs and the body of the machine. The boxes *b b* are provided with small orifices, through which a lubricating material may be applied to the axle to make its journals operate freely.

Within the frame A A', at the front end thereof, is a gear-wheel, F, which, being keyed upon the axle B', rotates while the machine is moving forward. The gear-wheel F meshes with a pinion, G, on a shaft, H, which carries also a bevel-gear, I, the latter gearing with a conoidal pinion, J, on one end of a crank-shaft, K, which has upon its other end a balance-wheel, L, the latter occupying a position on the outside of the frame, at the rear end. By means of the above gearing the motion is transmitted to the crank-shaft K in such a manner that it revolves in a plane at right angles to the carrying-wheels B B, and thus serves to impart the desired motion to the sickle or cutter-bar M through the medium of a jointed pitman, N, which is permitted the necessary vertical movement in a slot, *a''*, a similar slot being made at the opposite side of the machine, for the purpose to be presently explained. The finger-beam O is jointed to the coupling-link O', in order that the former may rise and fall independently of the latter, and the coupling-link is pivoted to and between lugs *a'' a''*, cast with the frame, for the purpose of adapting the inner shoe, P, which is attached at the junction of the coupling-link and finger-beam, to receive the necessary vertical movement to pass over obstructions.

The drawings represent the machine as being a "left-hand" mower; but both sides of the frame being provided with lugs *a'' a''*, for the attachment of the coupling-link O' with the finger-beam O, and each side also having a slot, *a''*, it is manifest that the implement may readily be converted into a "right-hand" mower—that is to say, the cutting apparatus

may be transferred to the right-hand side of the machine. Other parts employed in connection with the cutting apparatus are thus duplicated to adapt it to be transferred from side to side, and this statement will justify further reference to those on one side only.

Q is a brace-bar, which at its rear end is made fast at *q* to the coupling-link O'. At the front end said brace-bar terminates in a rounded portion, which passes through a lug, *a*⁵, formed on the frame A A', the object of which is to render the brace-bar capable of conforming to any movement which the coupling-link may receive. It should be here observed that the manner just described of bracing the coupling-link O' and finger-beam O obviates the use of extended or cumbrous braces and supports.

R is a lever, the fulcrum of which is constituted by a screw or threaded bolt, R', which fits within a corresponding orifice in a cylindrical socket, A², cast with the main frame. The lever R is connected to the coupling-link O' by means of a link, S, and extends forward beyond the seat of the driver, who can, with his foot, depress the lever, and thereby elevate the coupling-link, either for the purpose of passing over any immovable or dangerous object or in order to suspend the operation of the machine. A pin, *d*, passing through a

bracket, D², on the frame D', serves to retain the lever R in its depressed condition when the operation is discontinued. When this pin is withdrawn, the lever R permits the cutting apparatus to yield to the influence of gravity and fall to its working condition.

The shaft H has its bearings in boxes A³ A³, formed or cast with the main frame, and having suitable apertures to admit of the lubrication of the journals of said shaft.

By the use of gears and a crank inclosed within the close vertical frame A A', as explained, the dimensions, complication, and friction of the machine are much reduced.

Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent:

1. The close vertical casing constituting the main frame, to which the tongue C and bearings *b b* of the axle B' are attached, constructed in sections A A', inclosing the gearing, substantially as set forth.

2. In combination with the above, the gearing F G I J, crank-shaft K, and pitman N, the whole being arranged to operate in the manner and for the object set forth.

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Witnesses:

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