C. COLAHAN.

Mowing-Machines.

No. 140,890. Patented July 15, 1873.

Fig. 1.

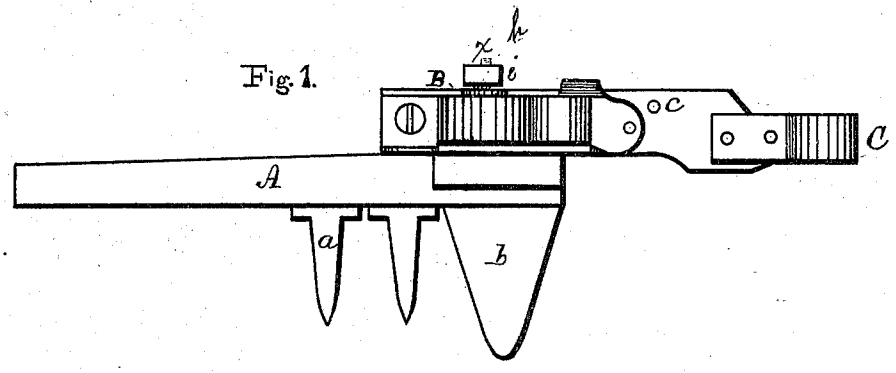


Fig. 2.

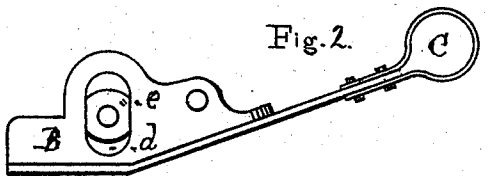


Fig. 3.

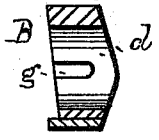


Fig. 4.

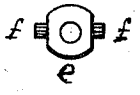


Fig. 5.

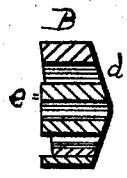
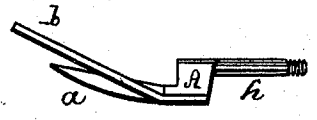


Fig. 6.



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Inventor:

Chas Colahan

UNITED STATES PATENT OFFICE.

CHARLES COLAHAN, OF CLEVELAND, OHIO.

IMPROVEMENT IN MOWING-MACHINES.

Specification forming part of Letters Patent No. **140,890**, dated July 15, 1873; application filed April 28, 1873.

To all whom it may concern:

Be it known that I, CHARLES COLAHAN, of Cleveland, Ohio, have invented certain new and useful Improvements in Mowing-Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings making a part of this specification, in which such parts of a machine are represented as are necessary to illustrate my invention, the wheels and frame being omitted.

Figure 1 is a plan of the cutter-bar and head to which it is connected or hinged; Fig. 2, a front elevation of the head and rocking piece *e;* Fig. 3, a detail in section, showing the inside of the opening in the head; Fig. 4, a front view of the rocking piece; Fig. 5, a section of the head at *x;* Fig. 6, an end view of the cutter-bar with the pin *h* attached thereto.

As mowing-machines have heretofore been made, it has been customary to hinge the inner end of the cutter-bar to a head so that the outer end of this bar could be elevated, if desired. In addition to this movement it is desirable to so connect the cutter-bar that it can have a rocking motion or be adjusted at various angles, to enable the guards to clear obstructions—which last-mentioned object has been accomplished by various devices, but always wholly distinct from the hinge first mentioned, thus using two independent connections, one permitting the elevation of the outer end of the bar, the other providing for the rocking movement.

The object of my invention is to simplify the devices used for the purposes mentioned, and so connect the cutter-bar to the head by means of a single joint, simple in construction, that by the use of this single joint the outer end of the bar can be elevated and the angle of the guards be adjusted, or the rocking movement be obtained.

One way of connecting the cutter-bar to the head has been to provide the bar with a strong pin, and the head with a round hole to receive the pin, the same being secured by a nut. This provides for the first-mentioned movement of the cutter-bar, but does not provide for adjusting the angle of the guards or the rocking movement, which answers the same purpose.

I accomplish the object of my invention by providing the head, to which the cutter-bar is hinged, with a hole so formed that when the pin, which is fastened to the bar, is suitably secured in such hole the rear end of the pin will be free to move up and down sufficiently to give the required rocking movement or permit the adjustment of the guards to the desired angle, while at the same time the outer end of the bar can be elevated as before, thus connecting the cutter-bar to the head by means of a two-way joint, simple in construction, but well adapted to accomplish the desired objects.

In the drawings, A represents the cutter-bar; *a*, guards; *b*, shoe; B, the head to which the bar A is hinged, which head is to be connected with the frame of the machine in any suitable manner. As represented, this connection is to be made at C, and a steadying-brace can be used at *c*. Through the head B is a hole, *d*, vertically oblong. *e* is a rocking bearing located in the hole *d* and supported therein by the lugs *f* on *e* resting in recesses *g*. This part *e* is smaller vertically than the hole *d* and has a rocking movement therein on the lugs *f*. The rocking bearing *e* has a hole through the center to receive the pin *h*, which is held in place by the nut *i*, which comes in contact with the part *e*, which projects a little beyond B on the back side.

When the parts are constructed and connected together as shown and described, the bar A is pivoted or hinged to the head B by the pin *h* passing through *e*, and the outer end of the bar can be elevated by means of levers in the usual manner. At the same time the cutter-bar has the desired rocking movement.

If desired, by the use of a set-screw or other suitable device at the rear of the part *e*, the guards could be adjusted and set at some given angle and still be free to move upward when passing over obstructions.

By making the hole *d* round, or nearly so, at the front of the head, and only large enough to receive the pin *h* and allow a little play thereof, and by gradually increasing the size of this hole vertically as it passes through the head B, thus making the hole vertically oblong, except at the front, the part *e* may be

omitted, and the desired results can be thus obtained; but I prefer the construction first described.

I have described the hole *d* as vertically oblong, and prefer this form, but it need not have this specific form. It is only essential that the hole be so enlarged and formed that the pin *h*, when secured therein properly, can have the double movement mentioned.

What I claim as new is as follows:

The pivoted drag-bar C and cutter-bar A, having the two-way joint connecting the same, consisting of the pin *h*, head B having the hole *d*, and rocking bearing *e*, all constructed and arranged for operation, as and for the purpose specified.

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