HASWELL & IRWIN.

Mowing Machine.

No. 107,487. Patented Sept. 20, 1870.

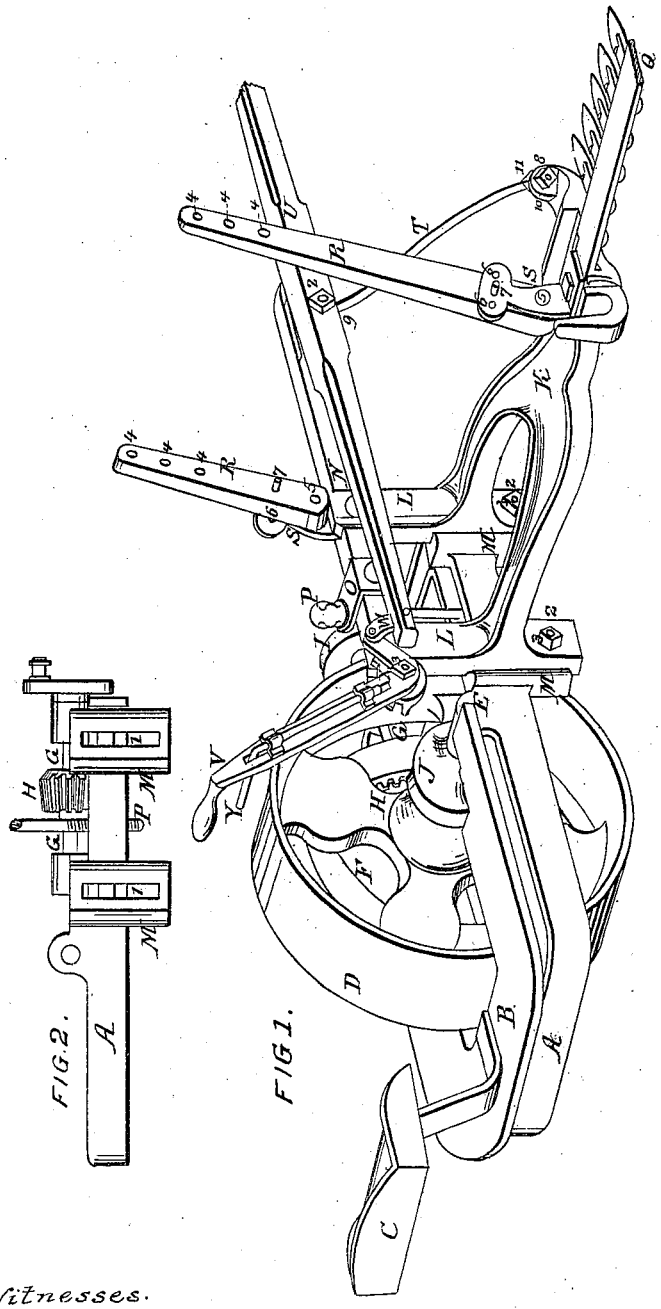

FIG 1.

FIG 2.

Witnesses.
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UNITED STATES PATENT OFFICE.

ANDREW J. HASWELL AND JOHN W. IRWIN, OF CIRCLEVILLE, OHIO, ASSIGNORS TO THEMSELVES, CHARLES E. WRIGHT, AND PALMER C. SMITH, OF SAME PLACE.

IMPROVEMENT IN HARVESTERS.

Specification forming part of Letters Patent No. **107,487**, dated September 20, 1870; antedated September 12, 1870.

We, ANDREW J. HASWELL and JOHN W. IRWIN, of Circleville, in the county of Pickaway and State of Ohio, have invented a new and useful Improvement in Reapers.

Nature and Objects of the Invention.

Our invention is of that class of reapers known as "one-wheel machines."

The advantages claimed for it over others are superior efficiency, strength, durability, simplicity, and compactness, with cheapness, ease of adjustment, and lightness of draft.

Its distinguishing characteristics in its preferred complete form are, first, a shoe having cast on or otherwise attached to it slides, to adjustably attach it to the gearing-frame, serving also as an anchor or attachment for the tongue; second, reel-posts and reel, tongue, and draft-rod, all arranged on the shoe of the cutter-bar, and raised and lowered therewith.

The invention further consists in certain novel combinations of parts for adjusting the cutter-bar and tongue, hereinafter set forth.

Description of Drawing.

In the accompanying drawing, Figure 1 represents a perspective view of our improved reaper in its preferred form, with the tongue and finger-bar broken off, and the reel, sickle, and other parts omitted. Fig. 2 is a side elevation of the main or gearing frame, and some of its adjuncts, detached.

General Description.

In reference to the drawing, similar letters and marks indicate like parts in the two figures.

In the drawing, A represents the main or gearing frame; B, the platform of the same; C, the driver's seat; D, the ground-wheel; E, its axis; F, the driving-gear; G, the crank-shaft; H, a pinion on the crank-shaft, meshing with the driving-gear F. I represents the crank-disk employed to operate, through a pitman, (not shown,) the cutter. (Not shown.) J represents the pulley on the hub of the ground-wheel D, for driving, through a cord, (not shown,) the reel. (Not shown.) K represents the shoe; L, the slides cast thereon for its attachment to the gearing-frame A and the support of the tongue, and M M the guides cast on the frame A for the reception of the slides L. 1 1 represent longitudinal slots in the guides M; 2 2, bolts passing through said slots and through perforations in the slides L; and 3 3, nuts on the bolts 2 2, for securing the slides L to the guides M, the slots 1 permitting the necessary vertical play for adjustment. N represents a cross-bar connecting the slides L at their upper ends; O, a bracket thereon, located centrally between said slides; and P, a vertical screw, supported by flanges in said bracket, and projecting downward therefrom, and engaging with its threaded end a female screw in the frame A, to raise and lower the shoe K and its attachments. Q represents the finger-bar. R R represent the reel-posts; 4 4, the perforations therein for the reception of the reel, (not shown,) being duplicated to permit its vertical adjustment; S, brackets for their attachment to the shoe K and adjustment. 5 5 represent pivots connecting the posts R and brackets S; 6 6, adjusting-perforations in said brackets; 7 7, studs on the posts, occupying one or the other sets of the perforations 6 to adjust their inclination. T represents the draw-bar; 8 and 9, the attachments of the same, respectively, at the toe of the shoe K, and at the front extremity of the cross-bar N, connecting its sides for the application of the means for adjustment and the attachment of the tongue. 10 represents a stud on the shoe K, traversed by the draw-bar T; and 11 11, nuts on the threaded end of said draw-bar, forming its attachment 8. Its attachment 9 is made by a transverse bolt. (Not shown.) U represents the tongue; 12, a pivotal bolt, forming its attachment to the bar N, by which it is attached to the slides L. V represents a hand-lever for adjusting the tongue U; 13, a pivotal bolt attaching said lever to the rear end of the cross-bar N; W, a link connecting it with the rear end of the tongue; X, a notched rack attached to the bar N, concentric with the pivot 13 of said lever, and Y a sliding latch thereon, engaging with the rack V, to hold it in its different positions, and the tongue at the desired inclinations.

The machine, as represented, is made entirely of metal, except the platform B of the gearing-frame, the cross-bar N, the reel-posts R and reel, and the tongue U, which is the preferred construction; but these parts may be also made of suitable metal, or other parts may be made of wood or other suitable material other than metal, if preferred.

The several parts may have any suitable form, and many of the details of their construction shown and described may be modified.

The several characteristic features of our invention, though intended and adapted for use combinedly, may be employed separately.

The adjustment afforded by the means 12 V W X Y enables the forward inclination of the machine to be regulated as desired; the adjustment afforded by the means S 5 6 7, the inclination of the reel independent of this adjustment; the means 4 $\frac{+}{-}$, the vertical adjustment of the reel independent of the cutter-bar.

We do not confine ourselves to the use of all or any of these adjustments.

By the means L M 1 2 3 N O P, or their equivalents, with the arrangement shown, the shoe, and with it the cutter-bar, reel-posts and reel, tongue and draw-bar, with the means for their separate adjustment, when such are employed, are enabled to be readily and expeditiously raised and lowered without disturbing their relative position and without affecting the gearing-frame.

An important advantage of the arrangement shown is, that the means requisite for raising and lowering the cutter-bar are further utilized for the anchorage or attachment of the tongue.

Claims.

I claim as my invention—

1. The shoe K, having upright slides L, for permitting its adjustment, and serving additionally as the means for attachment or anchorage of the tongue, substantially as shown and described.

2. The combination, with the shoe K and guides M, of the cross-bar N, bracket O, and screw P, for the purposes set forth.

3. The combination, with the shoe K and guides M and tongue U, of the cross-bar N, extended as shown, the pivot 12, lever V, link W, rack X, and latch Y, for the purpose stated.

4. The arrangement, in a reaper, of the reel-posts, tongue, and draft-bar, all on the shoe of the cutter-bar, so as to be raised and lowered therewith, as described.

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Witnesses:
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