J. Pine,
Mower.

No. 1,263.
32,267.

Patented May 7. 1861.

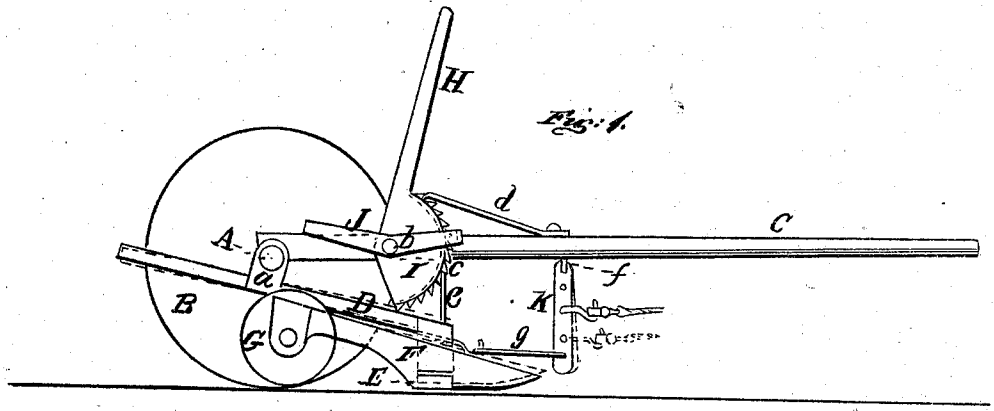


Fig. 1.

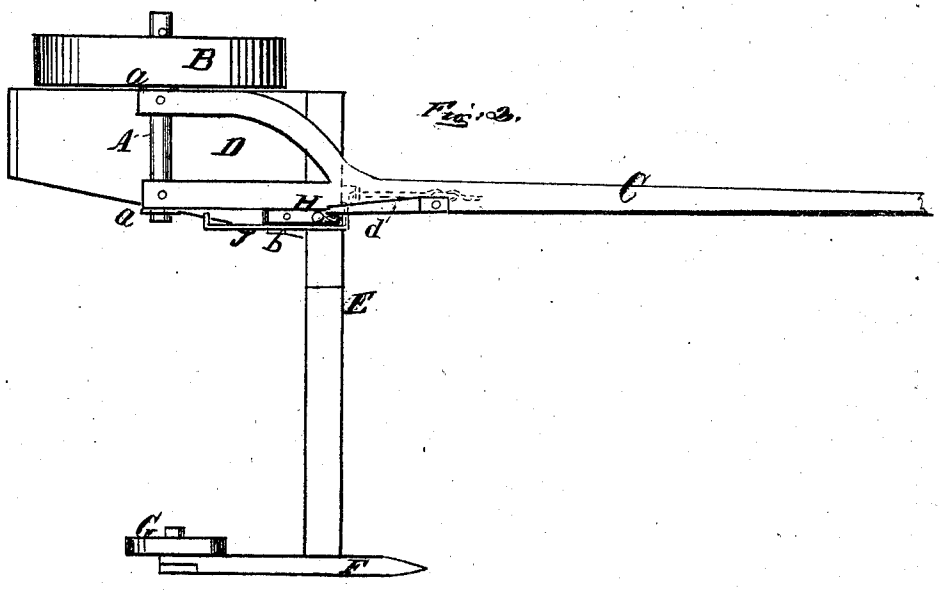


Fig. 2.

Witnesses
J. W. Coombs
R. S. Spencer

Inventor,
James Pine
per Munn & Co
Attorneys

UNITED STATES PATENT OFFICE.

JAMES PINE, OF TROY, NEW YORK, ASSIGNOR TO HIMSELF AND JOHN J. VIELE, OF SAME PLACE.

IMPROVEMENT IN HARVESTERS.

Specification forming part of Letters Patent No. **32,267**, dated May 7, 1861.

To all whom it may concern:

Be it known that I, JAMES PINE, of Troy, in the county of Rensselaer and State of New York, have invented certain new and useful Improvements in Grain and Grass Harvesters, (No. 2;) 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, making a part of this specification, in which—

Figure 1 is a side elevation of my invention; Fig. 2, a plan or top view of the same.

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

This invention relates to an improved device for varying the upward draft applied to the finger-bar without changing the angle of the latter.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents an axle, on one end of which a wheel, B, is fitted and allowed to rotate freely. To this axle A a draft-pole, C, is attached, either rigidly or by a joint. In Fig. 2 the draft-pole is shown as being rigidly attached to the axle.

D represents the gear-frame, which is connected to the axle A, or rather suspended from it, by straps *a a*, the axle being fitted loosely in the straps, so that the latter may work or turn freely on the frames.

To the front end of the gear-frame D the finger-bar E is attached, the grain end of which has a shoe, F, connected to it. The shoe F projects back of the finger-bar and has a grain-wheel, G, secured to it.

The back part of the draft-pole C has a lever, H, attached to it, and the lower part of the lever is connected to a segment, I, which is concentric with the fulcrum-pin *b* of the lever H. The segment I has ratchet-teeth *c* at one side of it, into which a pawl, *d*, catches.

J is a lever which is placed on the fulcrum-pin *b* of lever H. This lever J extends back within the reach of the foot of the driver, and its front end is bent around in front of the ratchet and projects below the pawl *d*. To the under side of the draft-pole C there is secured by a staple or joint, *f*, a pendent perforated bar, K, the lower end of which is attached by a rod, *g*, to the front end of the gear-frame D, as shown clearly in Fig. 1. To this bar K the double-tree is attached, and at a point higher or lower, as may be desired.

From the above description it will be seen that the draft-pole C may be elevated or depressed without at all affecting the gear-frame D, as the axle A is allowed to turn in the straps *a a*, and for the same reason the gear-frame, and consequently the finger-bar, will be allowed to rise and fall freely and conform to the inequalities of the surface of the ground. If the wheel B be permanently secured to the axle A, and the latter consequently turn with the former, the inner end of the draft-pole must be fitted loosely on the axle A by means of straps, so that the draft-pole may work loosely on it, and the result be the same as if the wheel be loose on the axle, and the latter allowed to turn by the working of the draft-pole. The same effect may also be obtained by attaching the draft-pole to the gear-frame by a joint at any point from its front end to its axle. The attachment of the draft-pole back of the axle would not answer, as the draft would have a tendency to force the finger-board into the ground. By this arrangement the difference in the height of teams will not affect the proper working position of the gear-frame and finger-bar, and the framing usually termed a "main frame," to which the draft-pole and gear-frame are attached, is dispensed with, and a machine of light and easy draft obtained. By having the draft connected to the bar K, as shown, the former is divided between the finger-bar and the draft-pole, and the draft will have a tendency to keep the finger-bar slightly elevated, so that it will skim lightly over the surface of the ground and prevent unnecessary friction and consequent side draft. This tendency of the draft to elevate the sickle may be increased or diminished, as circumstances may require, by adjusting the double-tree higher or lower on bar K.

The finger-bar is elevated, so that it may pass over obstructions, by drawing back lever H, the finger-bar being retained in an elevated state, in consequence of the pawl *d* engaging with the ratchet-teeth *c*. When it is desired to release the finger-bar E, the driver simply presses down with his foot the back end of lever J, and the front end of said lever forces

upward the pawl *d* and throws it out from the teeth *c*.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The combination of the perforated bar K and link *g*, attached to the tongue C and gear-frame D in the manner shown and explained, and employed in connection with an adjustable double-tree to vary the upward draft applied to the finger-bar without changing the angle of the said bar.

JAMES PINE.

Witnesses:
WM. B. LITCH,
WILLIAM A. NUNAM.