No. 674,468. Patented May 21, 1901.

H. PARMER.

SICKLE GRINDING ATTACHMENT.

(Application filed Feb. 27, 1901.)

(No Model.)

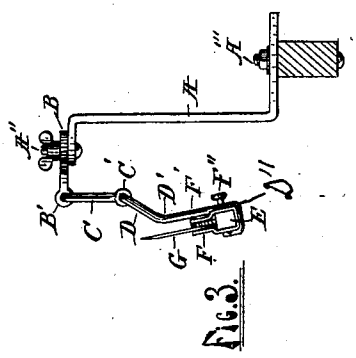


Fig. 3.

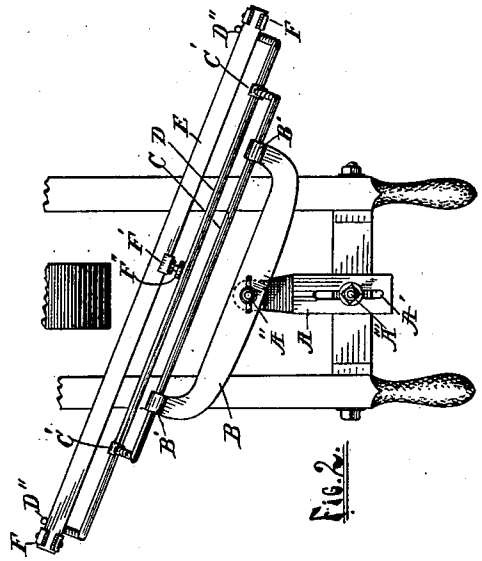


Fig. 2.

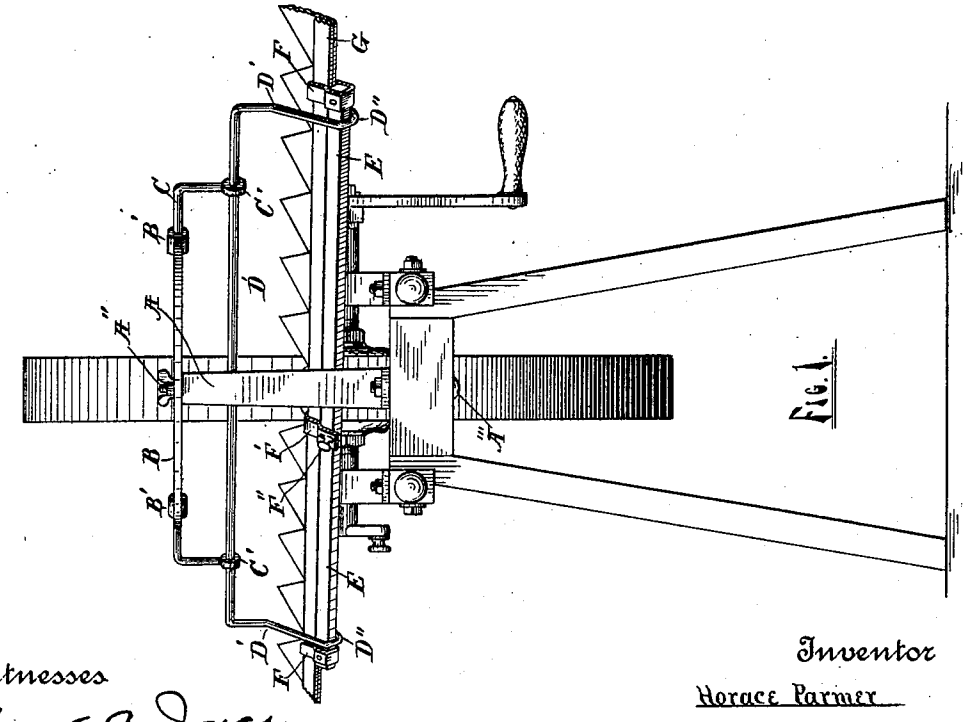


Fig. 1.

Witnesses
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UNITED STATES PATENT OFFICE.

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SICKLE-GRINDING ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 674,468, dated May 21, 1901

Application filed February 27, 1901. Serial No. 49,030. (No model.)

To all whom it may concern:

Be it known that I, HORACE PARMER, a citizen of the United States, residing at Hastings, in the county of Barry and State of Michigan, have invented certain new and useful Improvements in Sickle-Grinding Attachments; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in sickle-grinding attachments for use in conjunction with grindstones, emery-wheels, or other suitable grinding-wheels; and its object is to provide an improved device whereby the teeth on the sickle-bar of a reaping or mowing machine is held at a predetermined angle relative to the grindstone or emery-wheel and at the same time be freely movable vertically and toward and from the grinding-wheel to properly grind each tooth and also longitudinally adjusted to grind the teeth in succession.

My device consists, essentially, in a holder to receive the sickle-bar, in which holder the sickle-bar is longitudinally movable, and pendent supports for the holder pivotally suspended from a yoke, said yoke being pivoted to adjust about a vertical axis and supported upon a post adjustable toward and from the grinding-wheel, as hereinafter more fully described, and particularly pointed out in the claims, reference being had to the accompanying drawings, in which—

Figure 1 is an elevation of an ordinary grindstone with my device attached; Fig. 2, a plan view of my device and a part of the grindstone-frame, and Fig. 3 an end elevation of my device.

Like letters refer to like parts in all of the figures.

A represents a post located near the grinding-wheel and adjustably secured in place by a suitable bolt A″, passing through a slot A′ in the foot of the post, whereby said post is adjustable toward and from the grinding-wheel.

B is a yoke pivoted upon the top of the post A to turn in a horizontal plane about the axis of a bolt A″, which bolt is provided with a thumb-nut to clamp the yoke in adjusted position. This yoke is provided with a tubular head B′ at each end, in which is a longitudinally-movable and rotative rod C, having its respective ends turned downward and provided with eyes C′, in which is a second rod D, also longitudinally movable and rotative in the eyes C′. The respective ends of the rod are bent downward and at D′ are bent backward to turn the teeth of the sickle-bar forward toward the grinding-wheel. The ends of the rod D are provided with suitable hooks D″, in which is supported a bar E to support the sickle-bar G. To hold the sickle-bar upon the bar G and permit the longitudinal adjustment of the sickle-bar on the same, I provide fingers F at the respective ends of the bar E, adapted to embrace the sickle-bar, and a hook F′ to engage the upper edge of the sickle-bar and hold the same down upon the bar E. This hook F′ is made adjustable by a binding-screw F″, passing through a slot in the hook and into the bar E. The sickle-bar is thus freely movable longitudinally on the bar E and securely held thereon. The longitudinal movement of the rods C and D may be dispensed with and the movement of the sickle-bar on the bar E alone utilized; but I prefer both movements, as being more convenient.

In operating the device the yoke and parts supported thereby are adjusted at the proper angle to the grinding-wheel to properly present the teeth of the sickle to the surface of the wheel. The rotation of the rods C and D permits engaging the tooth with the grinding-wheel along the entire edge thereof, and at the same time the angle at which the tooth is ground will be unchanged. The longitudinal movement of the rods permits easy adjustment of the device to bring the teeth successively to the wheel, and when the limit is reached the sickle-bar is adjusted longitudinally on the bar E to grind another series of teeth. If the longitudinal movement of the rods is dispensed with, the sickle-bar is moved longitudinally on the bar E to properly engage each tooth in succession with the grinding-wheel.

With the holder for the bar pivoted below the same the bar tends to fall upon the stone and also to turn and jam the edge of the tooth into the stone. By pivoting the supports

above the bar the bar swings away from the stone and these objectionable features are avoided.

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

1. The combination of an adjustable yoke supported above the sickle-bar, a rod rotative in the yoke and having pendent ends and a support for a sickle-bar pivotally connected to the pendent ends of the rod, substantially as described.

2. The combination of an adjustable yoke supported above the sickle-bar, a rod rotative and longitudinally movable in the yoke, and a support for a sickle-bar pivotally connected to the pendent ends of the rod, substantially as described.

3. The combination of an adjustable yoke supported above the sickle-bar, a rod rotative in the yoke and having pendent ends, a second rod rotative in the pendent ends of the first-named rod, and a support for a sickle-bar attached to the second rod, substantially as described.

4. The combination of an adjustable yoke supported above the sickle-bar, a rod rotative and longitudinally movable in the yoke, and having pendent ends, a second rod rotative in the pendent ends of the first-named rod, and having pendent ends, a bar attached to the ends of the second rod, and means for slidably attaching a sickle-bar to the said bar, substantially as described.

5. The combination of a pivoted yoke supported above the sickle-bar, a bar having fingers and a hook to slidably engage a sickle-bar, and pendent rods connecting the bar and the yoke, substantially as described.

6. The combination of an adjustable post, a yoke supported by the post and pivoted to turn in a horizontal plane, a rod rotative and longitudinally movable in the yoke, and having pendent ends, a second rod rotative in the pendent ends of the first-named rod and having pendent and backwardly-bent ends, a bar attached to the pendent ends of the second rod, fingers on the bar to embrace a sickle-bar, and an adjustable hook on the bar, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

HORACE PARMER.

Witnesses:
P. A. SHELDON,
GEORGE WADDLE.