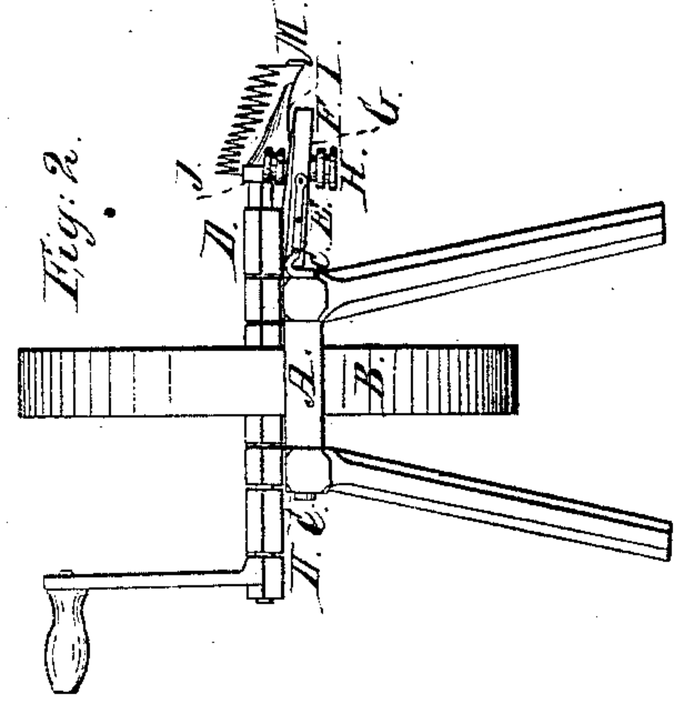
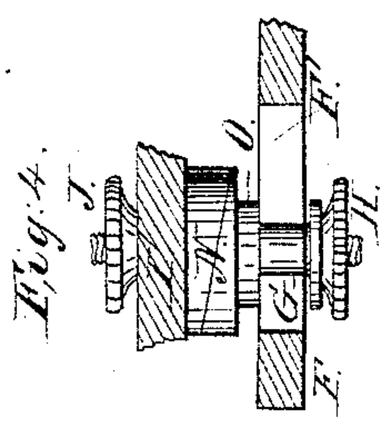
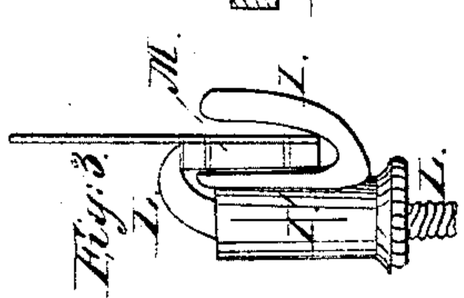
W. B. Deuel,

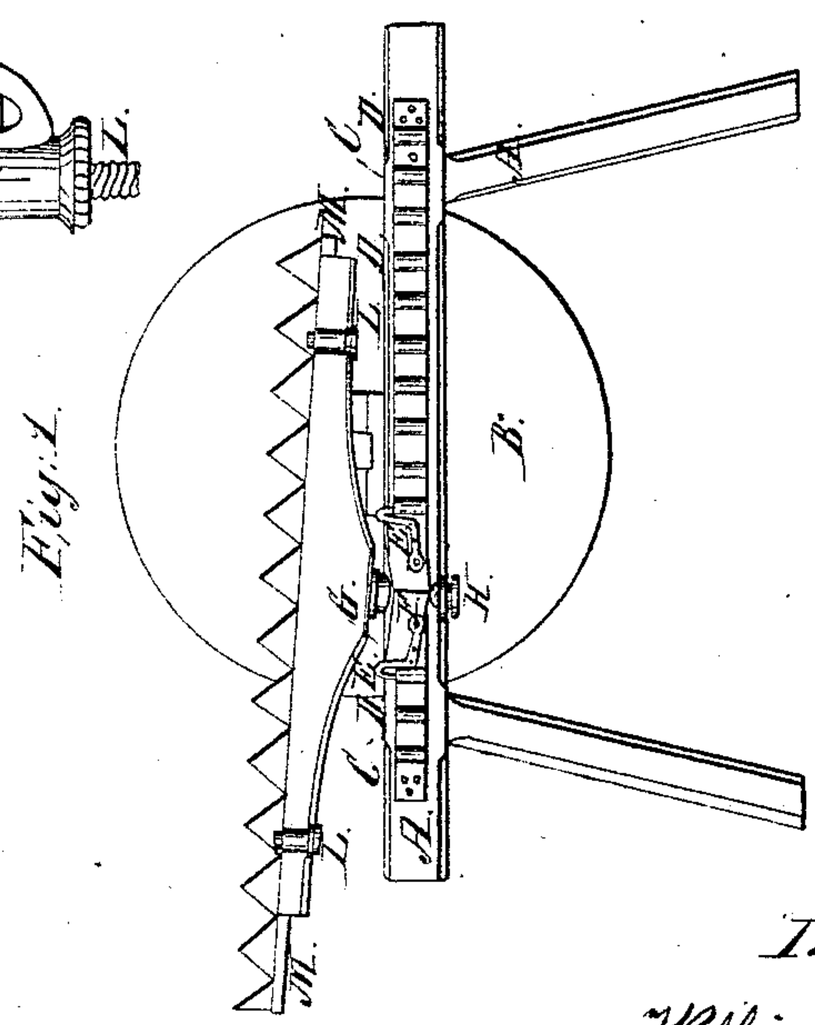
Sharpening Mower and Reaper Knives.

No. 83,767. Patented Nov. 3, 1868.









Witnesses:

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WILLIAM B. DEUEL, OF ITHACA, NEW YORK.

Letters Patent No. 83,767, *dated November* 3, 1868.

IMPROVEMENT IN MOWER AND REAPER-KNIFE SHARPENERS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, WILLIAM B. DEUEL, of Ithaca, Tompkins county, New York, have invented an Improved Mower and Reaper-Knife Sharpener; and I do hereby declare that the following is a full and accurate description thereof, reference being had to the accompanying drawings, and to the letters thereon.

Figure 1 is a side view of my sharpener attached to a common grindstone.

Figure 2, an end view of a common grindstone, with my plates attached to the sides of the frame, and with the sharpener in the same.

Figure 3 is a section of the cutter-bar holder.

Figure 4, a view of the bolt through the arm.

My object is to make a device by which I can hold, at the proper angle or inclination, the knives of a mower or reaper upon the plain ordinary face of a common and any-sized grindstone.

This I accomplish by making a wooden or metallic side piece or plate, which I attach, usually, on each side of the frame of a common stone. To this side piece or plate, by the series of holes in the same, I adapt an arm or projecting piece, which has dowels, pins, or hooks fitting into any two or more of the holes in the side plates, and thus I make an approximation to fitting the knives to the stone.

On this arm or projecting piece I fasten, by set-screws, the holder for the cutter-bar and knives, making the closer approximation of the bevel of the knives by turning the holder on a bolt or joint, aided by a straight or curved slot in the arm.

When one side of the knives is ground, I raise the dowel-pins or hooks out of the holes or mortises in the side plates, and put them in the corresponding holes of the same or opposite side of the stone, and thus I grind and sharpen each side of the knives as I move them on in the hollow of the holder.

I make the holder with a V-shaped or rounded deep cavity, to fit the varying thickness of varied cutter-bars, and by clamps and set-screws hold the cutter-bar by its upper edge, and thus fit any thickness and width of cutter-bars.

These parts are seen in the drawings, where, in fig. 1, A A is the frame of an ordinary grindstone; B, the stone; C, the plate attached to the frame; and D, the holes in the same, for receiving the hooks or pins, E, of the side piece F, which has the bolt G through any convenient-shaped slot in it, with the set-screw H holding the bolt in its place in the slot, and having the holder I on the upper end of the bolt, held by a set-screw. The clamps L and L hold the cutter-bar M by its edge in the hollow of the holder.

It will be readily seen that the dowels, pins, tenons, or hooks E are adjustable to any two of the holes D and D in the side piece or plate C, thus making the approximate fitting to the stone, be it of any size, and at either end of the stone-frame. And by the set-screw H, the holder can be set at any place in the slot, in the arm or side piece F, thus moving the knives to or from the stone. And by the upper set-screw of the bolt G, above the arm or side piece F, the holder I can be set at any angle to the stone. And by all of these parts the knives are ground on the common plain face of a common grindstone, be its size and thickness what they may. And by a plate, C, on each side of the frame A, each side of a thick stone can be used, and the stone wear evenly, and in the ordinary way, or by bevelled surfaces.

In fig. 2 the same letters indicate the same parts, and, by what has been said, its parts are easily understood.

In fig. 3 is seen a section of the cutter-bar, knives, and the knob for the clamp, and clamp attached. In it, I is the section of the deeply-grooved holder, with a hollowed V-shaped bottom, and M is the cutter-bar in it, with the knives attached to it, held by L, the clamp on its edge, and I′ is the clamp-knob, with set-screw at its base.

In fig. 4, G is the bolt through the slot F′, in the arm F, held in place by the immovable collar O and the set-screw H, and I′ is the projection from the holder I, binding the holder fast at any angle to the stone, by the set-screw J, and having either one plain loose collar, N, or two angled or oblique collars, N, between the holder I and fixed collar O of the bolt G.

The use of the double and inclined collars N is to set the holder I at any lesser obliquity or angle to the stone, and thus fit the bevel of the knives more perfectly to the stone.

The uses and advantages of my invention are clear and apparent to those skilled in the art to which it appertains.

Claims.

1. The arrangement and application, to the sides of an ordinary grindstone, of the plate or plates C, made with holes or mortises, to receive the pins or hooks E, for the purposes of holding and adjusting the described mower and reaper-knife holder to the face of an ordinary grindstone, substantially as set forth.

2. The arrangement of the arm or projecting piece F, with the pins or hooks E fitted to two or more of the holes in the plate C, and adjustable anywhere in the series of holes in the same, and sustaining the bolt G in its slot in the arm, and the cutter-bar holder, as set forth.

3. The cutter-bar holder I, when made with the deep and hollowed V-shaped bottom cavity, substantially as set forth.

4. The bolt G, when held in place in the arm F by the set-screw H, and adjustable for the holder I by the set-screw J, and the collar or collars N, bevel or obliquely, as described.

5. The clamps L, so arranged as to hold the cutter-bar M in the cavity of the holder I, by the edges of the cutter-bar, and on the rear of the knives, thereby leaving the face of the knives free, and open to the stone, as described.

6. The combination of the plates C, arm F, bolt G, and holder I with the frame of an ordinary grindstone, constructed and arranged to operate as set forth.

WILLIAM B. DEUEL.

Witnesses:

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