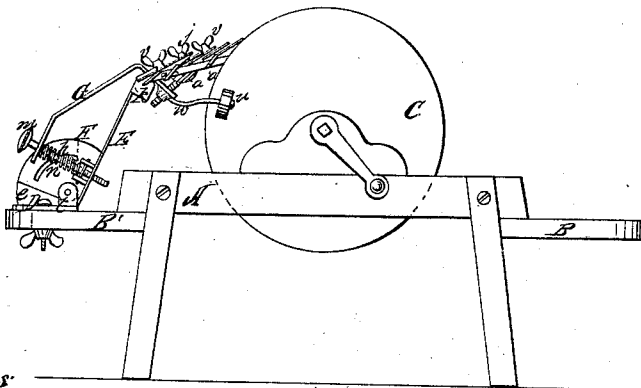
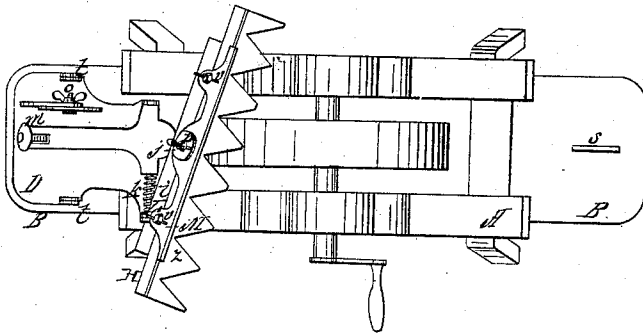


M. C. Cronk,

Grinding Harvester Knives.

No 78,863.

Patented June 16, 1868.



Witnesses:

*Charles Alexander
J. M. Miller*

Inventor

*M. C. Cronk
J. H. Alexander
Atty.*

United States Patent Office.

M. C. CRONK, OF AUBURN, NEW YORK, ASSIGNOR TO HIMSELF AND W. BOYNTON, OF SAME PLACE.

Letters Patent No. 78,863, dated June 16, 1868.

IMPROVEMENT IN MACHINES FOR GRINDING THE KNIVES OF MOWING-MACHINES.

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, M. C. CRONK, of Auburn, in the county of Cayuga, and State of New York, have invented certain new and useful Improvements in Grindstone-Attachments; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification, in which—

Figure 1 is a plan view of my reaper-knife grinder, and

Figure 2 a side elevation of the same.

To enable others skilled in the art to make and use my invention, I will now describe its construction and operation.

A represents the frame of the grindstone, constructed in the ordinary way, with the addition of the platforms B B', which are secured to the under side of the outer ends of frame A. C designates a common grindstone. The platforms B B' are each provided with a slot, s. D represents a metal plate, resting on platform B', and made adjustable by means of a thumb-screw, passing through it and the slot s. To the face of D is firmly secured the plate e, in a vertical position, the object of which will be hereinafter set forth. E represents a substantial metal plate, hinged at its lower end to the ears t t on plate D. To the outer surface of E, and at right angles with it, is fastened the plate F, through which is the slot n, made in the segment of a circle.

It will be observed that the outer surface of plate F will rest against the inner surface of plate e, and that a thumb-screw, o, passing through e and the slot in F, will regulate the position of the plate E, and thus allow it to be placed nearer or further from the grindstone, as the case may require.

G designates a lever, with a slot at its lower end, through which the thumb-screw m is made to pass. The inner end of the screw will work in a nut connected with plate E. On the screw m, and between the lever G and the nut, the spiral spring h is adjusted, for the purpose of throwing lever G outward when any pressure applied to it shall have been removed. k represents a bolt, passing through ears in the upper part of G, and through similar ears in the top of plate E. The bolt answers as a fulcrum to lever G, and admits of said lever playing with a lateral motion, the object of which will be presently seen. l is a spiral spring, placed on rod k, and intended to keep lever G from changing its position unnecessarily. H represents the cutter-bar, to which the knives are attached. L is a similar bar, placed immediately behind the cutting-bar H, and having two supports, a, attached to its under side, which act as rests to the cutter-bar H. The two bars, H and L, are flush, and are kept in that position by the metal plate M. P designates a flat-headed bolt, the head of which rests on the plate M, and its body secured to the top of lever G. Through the head of P a thumb-screw, j, is inserted, which passes through plate M, and serving as a pivot, upon which the said plate and cutter-bar attached can be adjusted in reference to the grindstone. The plate M is furnished with a rim on its under side and front edge, between which rim and the bar L is the cutter-bar H, which is allowed to slide so as to place the knives successively against the grindstone C.

It will be observed that the bar L is secured to plate M by the thumb-screws V V. W represents a rod, the inner end of which is fastened to the top of lever G, and the outer end provided with a friction-roller, u. The object of this roller is to counteract the bad effects of inequalities on the side of the stone. This it does by moving the rod, which will impart its motion to lever G, and to the cutter-bar and knives, in the manner already described.

In operating my machine, the knife will be held in the proper position by pressing on the end of plate M, and the necessary pressure given to the knife by operating lever G with thumb-screw m. When there is a wobbling motion in the stone, the knife will partake of that motion by the action of the pulley on lever G, and the action of lever G on the cutter-bar and knives. By means of this arrangement, the knife undergoing the process of grinding will always, when the stone wobbles, bear the same relative position to the surface of the stone, thus avoiding the possibility of blunting the edge of one knife while sharpening the one next to it.

The apparatus for grinding can be transferred from one platform, B, to the other, when required.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination of the plates D and E, arranged to operate as and for the purpose specified.
2. Lever G, rod *h*, and spring *l*, all combined and operating substantially in the manner and for the purpose set forth.
3. The combination of lever G, screw *m*, and spring *h*, arranged and operated substantially as and for the purpose specified.
4. The combination of lever G, bolt P, bars L and M, arranged and operating substantially for the purpose set forth.

In testimony that I claim the foregoing as my own, I affix my signature in presence of two witnesses.

M. C. CRONK.

Witnesses:

HORACE T. COOK,
JOHN BIRD.