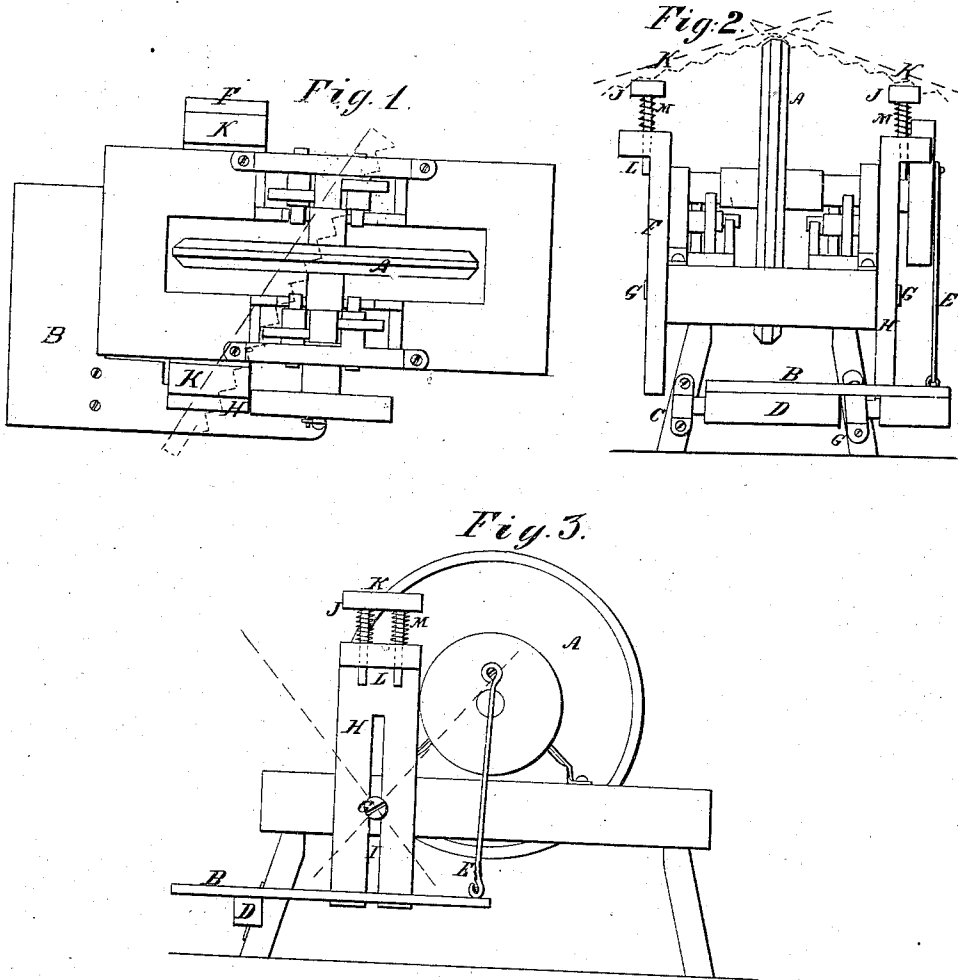


E. F. KEELING.
HARVESTER CUTTER GRINDER.

No. 33,043.

Patented Aug. 13, 1861



Witnesses:
W. A. Burdick
Henry Voth

Inventor:
E. F. Keeling

UNITED STATES PATENT OFFICE.

E. F. KEELING, OF MILTON, OHIO.

HARVESTER-CUTTER GRINDER.

Specification forming part of Letters Patent No. 33,043, dated August 13, 1861; Reissued November 9, 1869, No. 3,719.

To all whom it may concern:

Be it known that I, E. F. KEELING, of Milton, in the county of Wayne and State of Ohio, have invented certain new and useful
5 Improvements in Machines for Grinding Harvester-Cutters; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the
10 annexed drawings, making part of this specification, in which—

Figure 1, is a top view; Fig. 2 a front end view; and Fig. 3 a side view.

Like letters denote like parts in the several views.

The nature of my improvement relates to a machine, or a certain arrangement of devices for holding and adjusting harvester cutters to the periphery of an ordinary
20 grind stone, whereas when the cutters are ground on the side of the stone, it is necessary to make the stone expressly for this object by turning out a groove in the sides of it, consequently as the stone is worn
25 across it is useless. But with my improvement an ordinary stone may be used for this purpose until worn down to the eye. If a groove is not cut into the sides of the stone a shoulder is formed by its wearing away in
30 grinding the cutters, which shoulder will grind off the points of the cutters.

The apparatus employed for holding the cutters to the sides of the stone is so constructed that it is not practical for grinding
35 on the periphery.

A, represents an ordinary grind stone with its shaft hung upon friction rollers, and mounted upon a frame in the usual way. The treadle B, is hung or hinged to the
40 frame at C, C, by means of a shaft D, upon which the treadle rests, this treadle is also connected to the crank of the grind stone shaft by the rod E. The adjustable standards E, and H, are connected to the sides
45 of the frame by set screws G, which pass through the slot I, Fig. 3, in the standards. By means of the slot in each standard they are raised or lowered, also inclined more or less from the periphery of the stone as indicated in dotted lines Fig. 3, so as to adjust
50 the cutters to the diameter of the stone, that they may be ground at any desired angle, by means of the set screws the standards are held in the desired position.

55 At the head of each standard is placed a

spring rest J, consisting of the head K, with two stems L, L, extending from the head, and around which are placed the springs M, M. The stems are secured to the head K, and pass down through holes for them in the heads of the standards. The springs which rest upon the head of each standard support the heads K, K. Upon the head K, is placed the ordinary harvester cutters when arranged for use, the standards being so adjusted as to bring the cutters in proper position upon the stone, and so that all the cutters will be ground the desired uniform angle. When the standards are adjusted any number of cutters may be ground uniformly without further adjusting the standards except what little may be needed in the ordinary wear of the stone, different sets of cutters varying in the angle and bevel will need different adjustment by the standards however. In Fig. 1 the cutters are indicated by the dotted lines as being in position for grinding, and after one side of the cutters are ground they are then changed to the opposite spring rest so as to grind both sides. In Fig. 2 the cutters are indicated by dotted lines in red as being in place for grinding the opposite angle of the cutters from that noted in Fig. 1.

All grinding stones become more or less uneven in being used, so that at times it is difficult to hold the article to the stone to be ground truly, and in the case of cutters the inequality or unevenness of the stone would misshape or injure them as they could not be properly held by hand to prevent it, owing to their weight. But by means of the springs M, M, the cutters readily adjust themselves to the unevenness of the stone by the action of the springs under the heads K, K upon which the cutters rest.

What I claim as my improvement and for which I desire to secure Letters Patent, is—

The special arrangement of one or more adjustable standards H, and spring rest J, when combined and operating conjointly with the grind stone, substantially as described and for the purpose hereinbefore set forth.

E. F. KEELING.

Witnesses:

W. H. BURRIDGE,
HENNY VOTH.