(No Model.) 2 Sheets—Sheet 1.

J. R. HAMILTON.

TOOL HOLDER FOR GRINDSTONES.

No. 359,151. Patented Mar. 8, 1887.

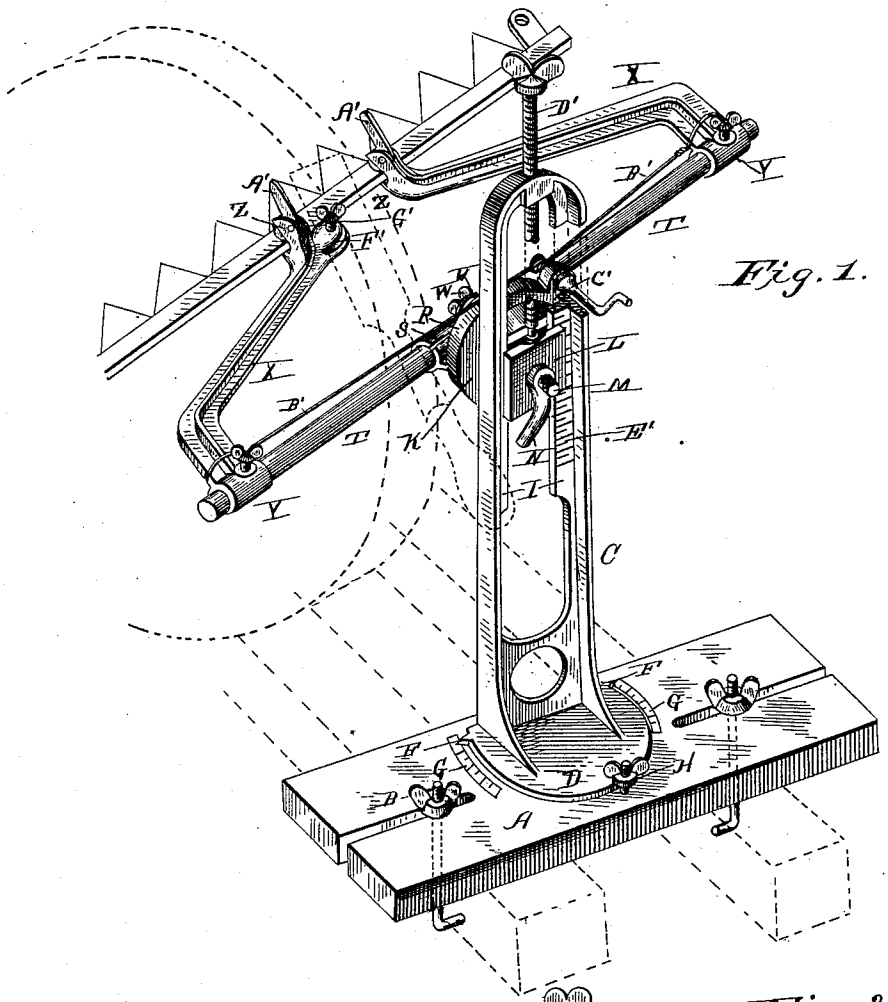


Fig. 1.

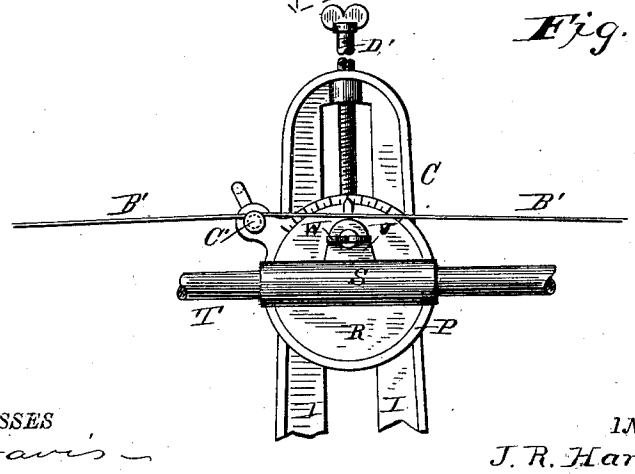


Fig. 2.

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Fig. 3.

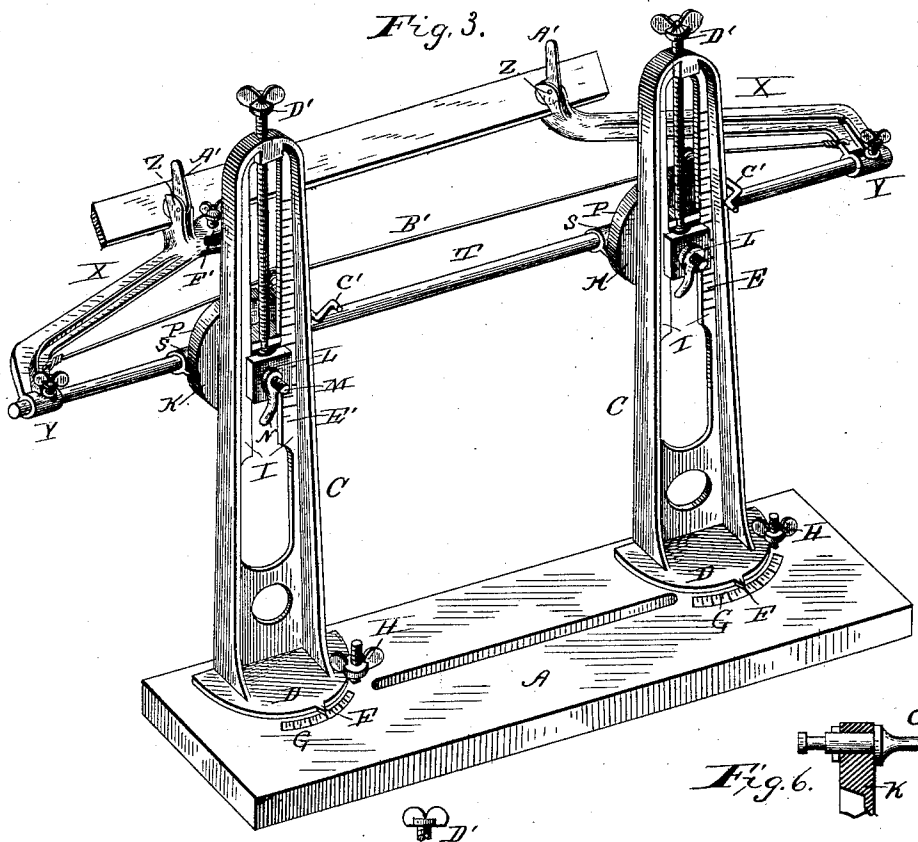


Fig. 6.

Fig. 4.

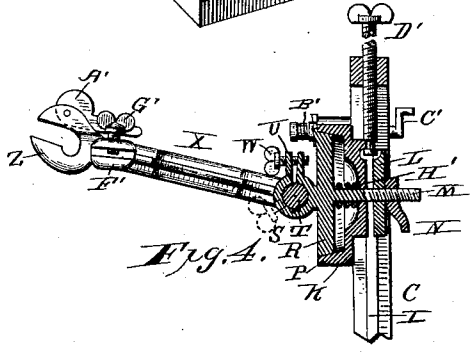
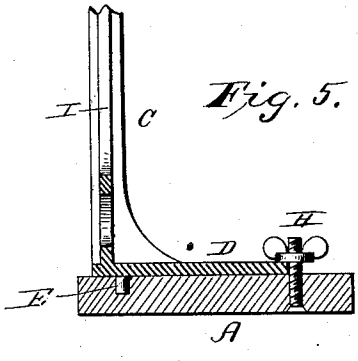


Fig. 5.



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UNITED STATES PATENT OFFICE.

JONATHAN R. HAMILTON, OF MINNEAPOLIS, MINNESOTA.

TOOL-HOLDER FOR GRINDSTONES.

SPECIFICATION forming part of Letters Patent No. 359,151, dated March 8, 1887.

Application filed June 21, 1886. Serial No. 205,804. (No model.)

To all whom it may concern:

Be it known that I, JONATHAN R. HAMILTON, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Tool and Implement Holders for Grindstones, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain improvements in devices for supporting and holding the knives of reapers, mowers, and the like, and adjusting them in proper position with respect to the grindstone while being ground, as more fully hereinafter specified; and it has for its objects to provide an attachment which may be secured to the bed of the grindstone, and which is provided with suitable adjustable devices for clamping the knives and presenting the same conveniently and without trouble at any desired angle to the stone, as more fully hereinafter specified. These objects I attain by the means illustrated in the accompanying drawings, in which—

Figure 1 represents a perspective view showing one form of my improved attachment; Fig. 2, a front elevation of a portion of the device in detail; Fig. 3, a perspective view of a modification of my improved device; Fig. 4, a transverse sectional view of the upper portion of the device, showing the clamping mechanism; Fig. 5, a similar view of the lower portion of the device, showing the lower clamping mechanism; and Fig. 6, a detail sectional view showing a portion of the device, which will be hereinafter described.

The letter A indicates a rectangular base, which is slotted longitudinally, as shown, for the reception of the clamping-bolts B, by means of which it is clamped to the bed of the grindstone.

C indicates a vertical standard having a horizontal base-plate, D, which is pivotally secured to the base A by means of a lug, E, so as to turn freely upon said base A. The edge of the plate D is struck on the arc of a true circle and is provided with pointers F, which travel along the segmental graduations G, so as to provide for the accurate adjustment of the standard when turned to any desired position.

H indicates a clamping screw and nut for binding the standard in any desired position. The vertical portion of the standard consists of an open frame having vertical guides or ways I, between which is adapted to slide the rectangular rear portion of a disk, K, and the rectangular clamping-plate L, which are held together by a screw, M, and a clamping-lever, N, which also serves to bind said parts at any desired elevation between the guides or ways.

The disk K is provided with a rim, P, on its forward face, and within said rim is secured a clamping-disk, R, which is adapted to turn therein, and to which the clamping-screw M, before mentioned, is securely fastened. Forming part of the said disk R is a transverse sleeve, S, through which passes a rod or bar, T, of suitable length. The rod is arranged to slide freely in said sleeve, but the sleeve is provided with a set-screw or cam for binding the rod in any desired position; or the sleeve may be split and provided with lugs U, having a binding-screw, W, by means of which the sleeve itself may be tightened around the rod to accomplish the same purpose.

The letter X indicates two bent arms, which are provided with sleeves V at their rear ends and are adjustably secured by means of set-screws to the bar T. The forward ends of these bars are provided with clamps Z, in which the knife is held by means of the clamping-levers A′.

B′ indicates two chains, wires, or cords, which are secured to the bent arms, respectively, by passing their outer ends around said arms or through holes in the same, and fastened by twisting or otherwise. The inner ends of these wires or chains are secured to a crank-shaft, C′, journaled in a bearing formed on the disk K, so that by turning the crank the bar may be traversed back and forth, carrying the knife to be ground properly over the stone.

D′ indicates a vertical adjusting-screw passing through the upper part of the standard, its lower end being swiveled between the disk K and clamping-plate L, so as to move the parts vertically and adjust the same, the degree of adjustment being determined by the graduations E′ on one of the vertical guides or ways before mentioned.

In the modifications two of the vertical standards C are employed, the said standards

and their adjustable parts being precisely like those shown in Fig. 1 of the drawings, and a detailed description of the same is deemed unnecessary.

As shown in Fig. 1, one of the bent arms near its ends is provided with lateral lugs F′ and a clamping-screw, G′, by means of which small tools, such as a chisel-blade, as shown in dotted lines, may be held to the grindstone, which is also shown in dotted lines in said figure.

It will be seen that by my improved attachment the knives or blades may be adjusted to any of the various angles required for grinding without removing the same, thus forming a convenient and efficient device.

Between the sliding and rotating disks, and bearing them outward normally, is arranged a spiral spring, H′, which serves to release or loosen the parts when the clamping screw is turned, so as to relieve the positive or binding pressure upon the parts.

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

1. The combination, with the base slotted for the reception of bolts by which it may be secured to the bed of the grindstone, and graduated as described, of the standard having a horizontal base-plate and pivotally connected to the base, the pointers adapted to act in conjunction with the graduates, and the clamping devices adapted to hold the standard in an adjusted position, substantially as specified.

2. The combination, with the standard having vertical ways or guides, of the vertically-movable disk having its rear squared and fitted to slide between the guides or ways, and the screw and clamping-lever, whereby the parts are held in an adjusted position.

3. The combination, with the frame, the vertical moving disk, and clamping-plate, of the rotating disk having a sleeve on its forward face and provided with a screw extending through the vertically-moving disk, and the clamping-lever, all arranged to operate substantially in the manner specified.

4. The combination, with the vertically-slotted standard, the disk K, having extending laterally across its face the sleeve S, and the clamping mechanism, of the rod T, passing through said sleeve and provided with adjustable arms to support the knife or blade, substantially as described.

5. The combination, with the bar and supporting-arms and the sleeved disk, of the chains, wires, or cords secured to said arms and the crank-shaft and its bearings, the wires being secured to said shaft, whereby the bar may be traversed back and forth over the stone, substantially as set forth.

6. The combination, with the standard, its vertical graduated ways or guides, and the vertically-sliding disk and clamping-plate, of the screw swiveled between the same and passing through the standard, whereby the parts are adjusted vertically, substantially as specified.

7. The combination, with the vertically-slotted standard C, the disk K, vertically adjustable, the rotatable disk R, provided with a sleeve extending laterally across its face, and the clamping devices, of the rod T and bent arms X, provided with clamping devices, substantially as described.

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

JONATHAN R. HAMILTON.

Witnesses:

C. M. ALEXANDER,
M. P. CALLAN,
CHAS. D. DAVIS.