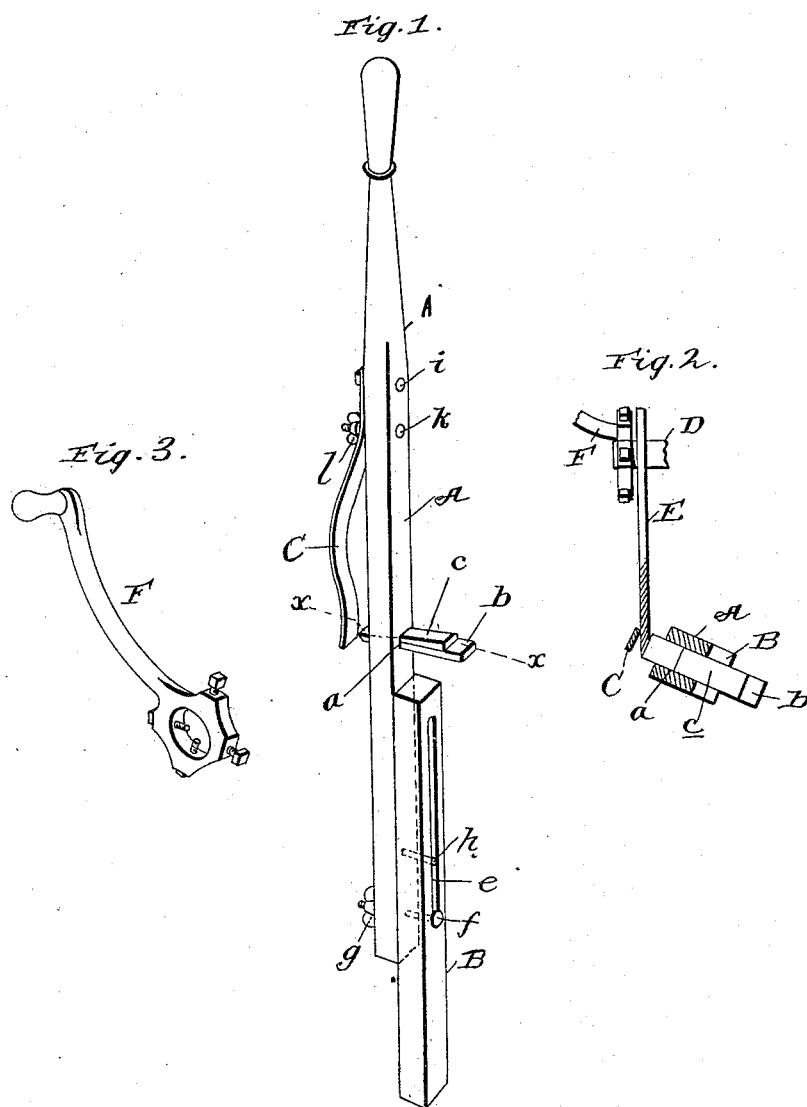


(No Model.)

H. S. CLINTON.
IMPLEMENT FOR SHARPENING DISK-KNIVES.

No. 553,279.

Patented Jan. 21, 1896.



Witnesses:
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UNITED STATES PATENT OFFICE.

HARMON S. CLINTON, OF ANCONA, ILLINOIS.

IMPLEMENT FOR SHARPENING DISK KNIVES.

SPECIFICATION forming part of Letters Patent No. 553,279, dated January 21, 1896.

Application filed January 31, 1895. Serial No. 536,852. (No model.)

To all whom it may concern:

Be it known that I, HARMON S. CLINTON, a citizen of the United States, residing at Ancona, in the county of Livingston and State of Illinois, have invented certain new and useful Improvements in Implements for Sharpening Disk Knives; and I do 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.

This invention has relation to an improvement in implements for sharpening circular knives or cutting-disks; and it has for its prime object to provide a device at a minimum expense which will serve very effectively in sharpening knives or disks while mounted upon rotatable shafts, and will require but little or no experience on the part of the operator, the parts being so combined and arranged that the implement may be adjusted to various heights, and will engage the knife so as to aid in holding itself in position while the knives are being turned against the cutter without interfering with its being moved by the operator in order to form the desired bevel on the knife.

The invention will be fully understood from the following description and claims when taken in connection with the annexed drawings, in which—

Figure 1 is a perspective view of my improved device, showing the same ready for use. Fig. 2 is a sectional view taken in the plane indicated by the dotted line *xx* on Fig. 1, showing the same with a knife in position to be sharpened and a part of the shaft upon which the knife is mounted, as well as a part of the crank-arm for turning the shaft. Fig. 3 is a perspective view of the crank-arm removed.

Referring by letter to said drawings, A indicates a bar which may be composed of wood or other suitable material having a handle turned on one end, and while the bar is here shown as of rectangular form in cross-section it may be of any suitable form or configuration. This bar is provided at a suitable point in its length with a transverse aperture *a*, and in this aperture is placed a steel blade or cutter *b*, which may be secured in position by means of a wedge *c* or other suitable fas-

tening device, and the cutting-edge of this cutter projects sufficiently from one side of the bar, as shown.

B indicates a bar which is designed to serve as a leg or support for the implement. This leg is provided with a longitudinal slot *e* for a sufficient distance in its length and is held adjustably to one side of the bar A, so that it will slide and be secured thereon by means of a threaded bolt *f*, which may be headed at one end and takes through the bar A, near its lower end, with its projecting and headed end passing into the slot of the leg. A thumb-screw *g* is employed on the threaded end of this rod or bolt for securing the same, and a guide-pin *h* may be provided in addition to the bolt to take through the slot of the leg and aid in guiding and retaining said leg in position.

C indicates a flat spring or spring composed of flat metal and preferably steel. This spring is curved, as shown, and is secured at its upper end to one side of the bar A by means of a bolt *i* and nut or other suitable fastening devices. The lower end of this spring extends to a point opposite the cutter or approximately so, and its tension is regulated by means of a threaded bolt *k*, which is fixed in the bar A and passes through the spring at an intermediate point in its length, and the thumb-screw *l* arranged on said bolt to bear against the outer side of the spring. This spring is designed to engage the outer side of the disk or circular knife to be sharpened, so as to aid in holding the implement against the knife or disk.

D indicates a part of a shaft, and E indicates a part of a circular knife or disk designed to be secured to said shaft. The shaft may contain any number of disks or circular knives and a detachable crank-arm, as F, may be employed for turning the shaft and consequently the knives or disks. This crank-arm may be of any suitable construction, the one here shown having an eye to receive the shaft and four bolts or screws for detachably connecting said arm and shaft.

In using my improved implement the leg B is first adjusted and adjustably fixed so that when the lower end of the implement rests upon the ground or other base the cutter will engage the disk knife at the proper point.

The implement is then placed in engagement with the knife with the cutter *b* on one side and the spring *C* on the opposite side, and the thumb-screw *l* is adjusted, if necessary, to regulate the tension of the spring. The operator grasps the implement at its upper end and at an intermediate point of its length, and by reason of the spring *C* being employed instead of a rigid clamp the operator is enabled as the knife is rotated to adjust the implement so as to form the desired bevel on the knife, which is a desideratum.

Having described my invention, what I claim is—

1. The herein described disk knife sharpener comprising the bar or frame *A*, the leg or support *B*, adjustably connected to the bar or frame *A*, a sharpening blade or implement carried by the bar or frame *A*, and adapted to engage one side of a disk knife and the spring connected to the bar *A*, and adapted to engage the opposite side of the

disk knife, substantially as and for the purpose set forth.

2. The herein described disk knife sharpener comprising the bar or frame *A*, the leg or support *B*, having a longitudinal slot, a bolt extending through the slot of the leg *B*, and the bar *A*, a thumb-screw mounted on said bolt, a sharpening blade or implement carried by the bar or frame *A*, and adapted to engage one side of the disk knife, the spring *C*, connected at one end to the bar *A*, and adapted to engage the opposite side of a disk-knife, a threaded bolt taking through the spring *C*, and bar *A*, and a thumb-screw mounted on said bolt, substantially as and for the purpose set forth.

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

HARMON S. CLINTON.

Witnesses:

H. D. SEMANS,

THOMAS DEFENBAUGH.