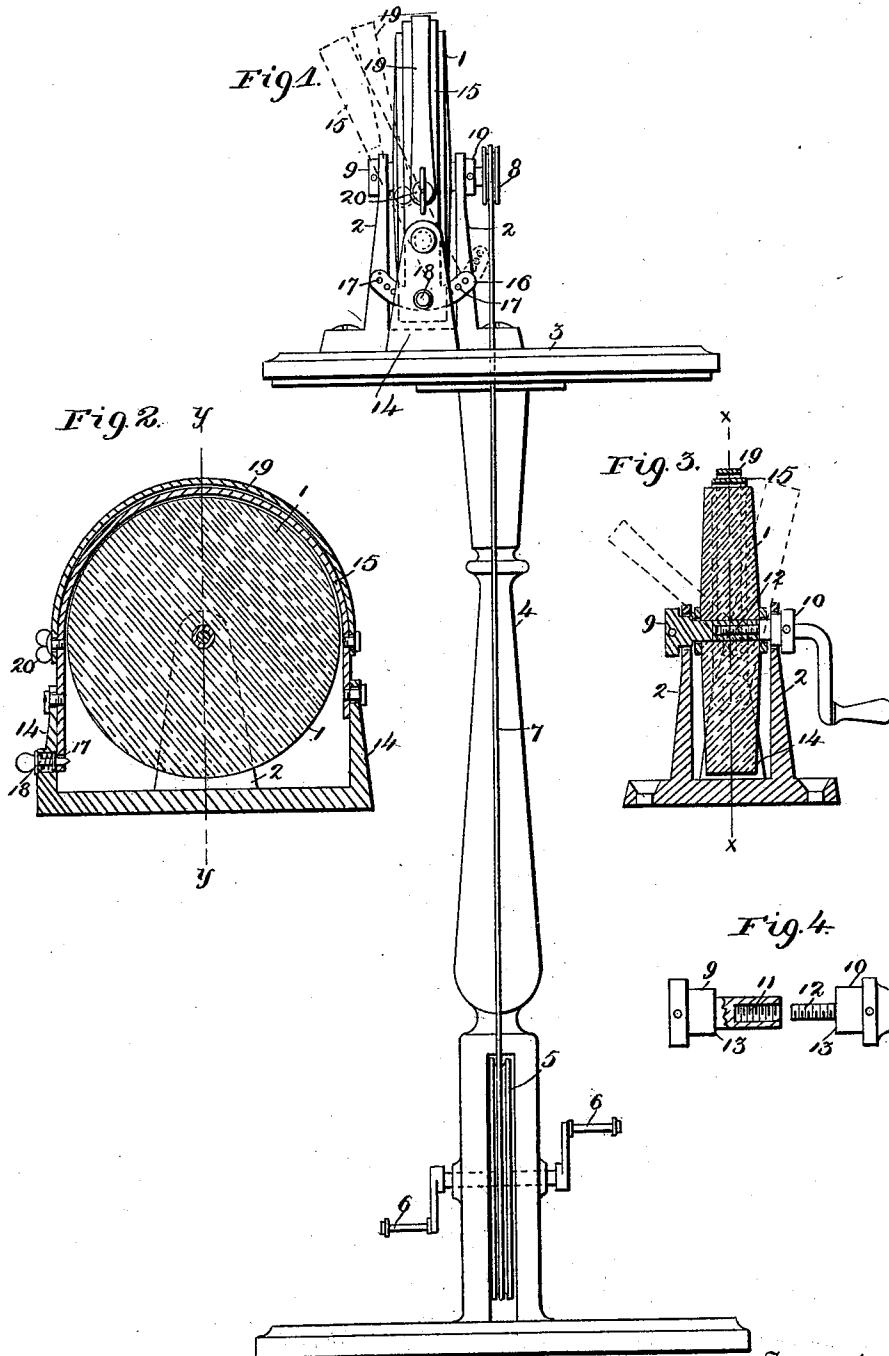


(No Model.)

A. M. McLERAN.
TOOL SHARPENER.

No. 544,544.

Patented Aug. 13, 1895.



Witnesses
Burt Paradise
die Sale

Inventor
Alvord M. McLeran
By His Attorneys
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UNITED STATES PATENT OFFICE.

ALVORD M. McLERAN, OF ST. LOUIS, MISSOURI.

TOOL-SHARPENER.

SPECIFICATION forming part of Letters Patent No. 544,544, dated August 13, 1895.

Application filed November 24, 1894. Serial No. 529,851. (No model.)

To all whom it may concern:

Be it known that I, ALVORD M. McLERAN, a citizen of the United States, residing at St. Louis, Missouri, have invented certain new and useful Improvements in Tool-Sharpener, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention has relation to improvements in tool-sharpener; and it consists in the novel arrangement and combination of parts more fully set forth in the specification and pointed out in the claims.

In the drawings, Figure 1 is a front elevation of the device. Fig. 2 is a vertical longitudinal section on the line *xx* of Fig. 3. Fig. 3 is a vertical cross-section on the line *yy* of Fig. 2, and Fig. 4 is a detail of the two-part shaft for the rotating disk.

The object of my invention is to construct a tool-sharpener whereby tools of various description—such as knives, shears, and the like—can be sharpened with readiness and exactness, the device being so constructed that the operator can adjust the tool to that position which will determine the angle of the cutting-edge of the tool. To this end the device is constructed as follows:

Referring to the drawings, 1 represents a rotating disk of emery, sandstone, or other suitable material mounted between bearings 2, secured to a base 3, which is supported on a standard 4, provided at its lower end with a grooved pulley 5, adapted to be operated by the pedals 6, and from which pulley extends a belt 7, around the standard, through a suitable opening in the base 3, and over a grooved pulley 8, mounted at one end of the shaft of the rotating disk. The shaft of the disk is preferably composed of two parts 9 and 10, the former having an interiorly screw-threaded socket 11, adapted to be passed over the screw-threaded extension 12 of the other part, and when the parts are fitted together the disk rests between the enlarged ends 13 of the respective parts. On opposite sides of the periphery of the disk, and forming a part of the casting constituting the bearings 2, are upright posts 14, to which are respectively pivoted the opposite ends of a guide-band 15, one end of said band extending a suitable distance beyond the pivotal point on that side and pro-

vided with an arc 16, having a series of openings 17, with which is adapted to engage the inner end of a spring-controlled pin 18, mounted at the base of one of the posts 14. It is apparent that the band 15 can be swung about its pivotal points to suitable angles with the general plane of the disk, and when swung to any angle (by first withdrawing the pin 18 from engagement) can be retained at that angle by engaging the pin 18 with the particular opening 17 which is opposite to it for that particular position of the band. Pivoted to the band 15, at opposite sides of the center thereof, is a second guide-band 19, which may be made to swing either with the band 15 or be tilted independently thereof, as shown in dotted lines in Figs. 1 and 3, and clamped by the thumb-nut 20 when once in proper position.

The tool to be sharpened, be it a knife or shears, is placed with its flat or broad side along the side of the band adjacent to the disk and the edge of the tool drawn toward the operator and along the side of the sharpening-disk, or the tool may be held stationary to the disk and the latter turned or operated by the foot-power above described.

By my present arrangement it is obvious that the tool can be sharpened at any angle, and when the guide-bands 15 and 19 are once adjusted the same will remain in position until changed for a different description of tool.

It is immaterial, of course, what the nature of the driving mechanism for the disk may be, and where Fig. 1 illustrates a device operated by foot-power Figs. 2 and 3 illustrate one that may be turned by a crank in the hands of the operator.

Having described my invention, what I claim is—

1. In a tool sharpener, a suitable sharpening disk, and a tilting support for the tool embracing said disk and adapted to bring the latter to any angle along the side of the disk, and at the same time supporting and guiding said tool, substantially as set forth.

2. In a tool sharpener, a suitable disk, bands embracing the disk and adapted to be tilted to any angle with the plane of the disk, and means for rotating the disk, substantially as set forth.

3. In a tool sharpener, a suitable disk, a se-

ries of superposed bands pivotally secured to one another and embracing the disk, means for tilting said bands independently of one another to any suitable angle with the general plane of the disk, and suitable driving mechanism for the disk, substantially as set forth.

4. In a tool sharpener, a suitable rotating disk, suitable bearings for said disk, suitable posts on opposite sides of the periphery of the disk, a band pivoted to said posts and embracing said disk, an extension at one end of the band, a perforated arc at the end of said extension, a spring-operated pin mounted in

one of the posts and adapted to co-operate with the series of openings of said arc and thus hold the band in any tilted position, a second band pivoted exteriorly to the first band and adapted to be tilted independently thereof, and suitable driving mechanism for the disk, substantially as set forth.

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

ALVORD M. McLERAN.

Witnesses:

LEE SALE,
EMIL STAREK.