Oct. 6, 1925. 1,556,471

E. M. ANDRUS

GRAVER SHARPENER

Filed May 10, 1924

Fig. 1.

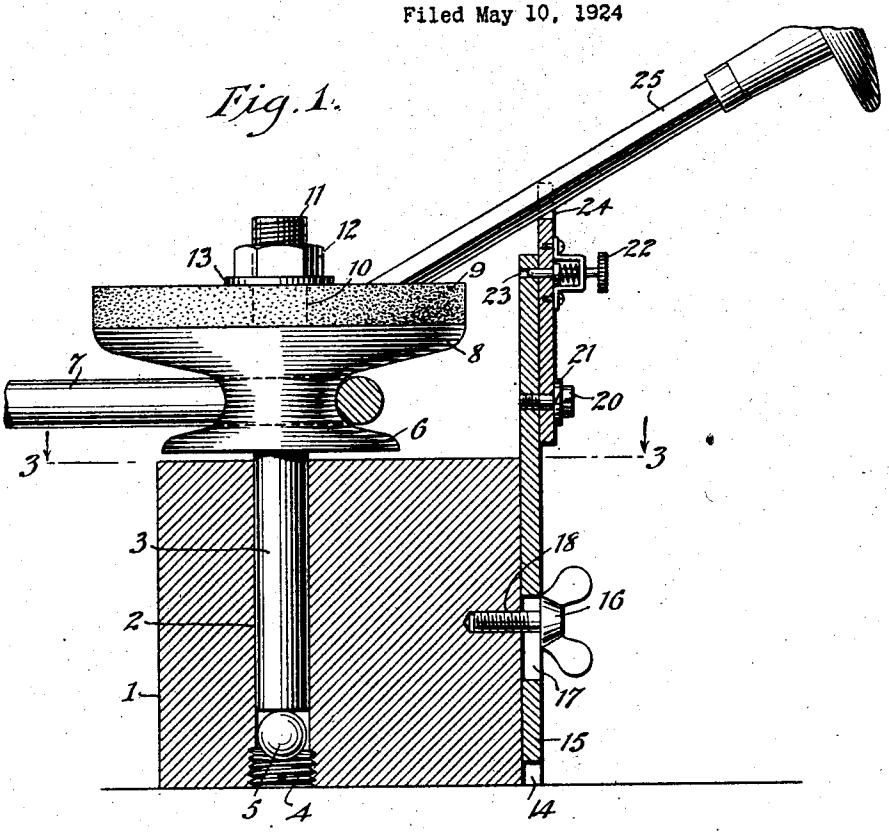


Fig. 2.

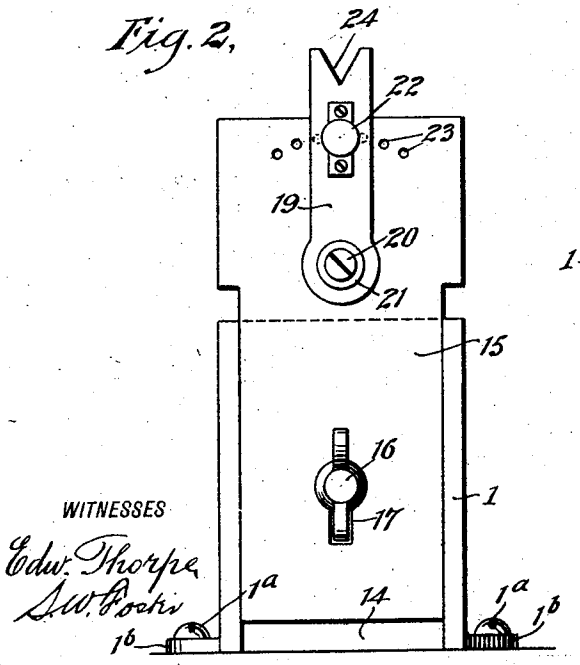
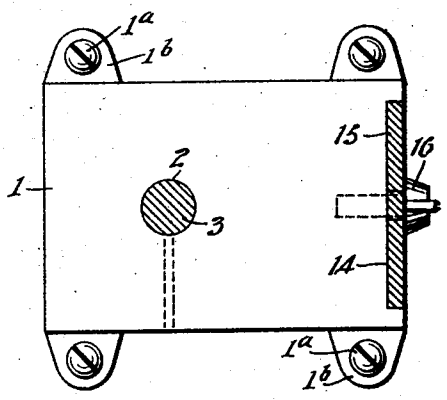


Fig. 3.



WITNESSES

Edw. Thorpe

S. W. Cochis

INVENTOR

E. M. Andrus

BY Munn & Co.

ATTORNEYS

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UNITED STATES PATENT OFFICE.

EDWIN MERRITT ANDRUS, OF MACON, GEORGIA.

GRAVER SHARPENER.

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To all whom it may concern:

Be it known that I, EDWIN M. ANDRUS, a citizen of the United States, and a resident of Macon, in the county of Bibb and State of Georgia, have invented a new and Improved Graver Sharpener, of which the following is a full, clear, and exact description.

This invention relates to graver sharpeners and more particularly to an apparatus which is designed to quickly and accurately sharpen tools, an object of the invention being to provide an apparatus capable of adjustment so as to properly support the tool for sharpening or polishing or honing the cutting end thereof at any desired angle.

A further object is to provide an apparatus of the character stated which is capable of a wide range of utility, which is of extremely simple construction, which is strong and durable in use, and which insures the proper sharpening of the instrument.

With these and other objects in view, the invention consists in certain novel features of construction and combinations and arrangement of parts which will be more fully hereinafter described and pointed out in the claim.

In the accompanying drawings—

Figure 1 is a view in longitudinal section illustrating my improved sharpener;

Figure 2 is a view in elevation taken at right angles to Figure 1;

Figure 3 is a view in horizontal section taken on the line 3—3 of Figure 1.

1 represents a base which may constitute a block of metal or other suitable material having a longitudinal bore 2 therein constituting a bearing for a vertical shaft 3. This block 1 is preferably secured to a support by means of screws 1^a projected through perforated lugs 1^b at the bottom thereof, as clearly shown in Figures 2 and 3.

A plug 4 is screwed into the lower end of the bore 2 and supports a ball 5 on which the lower end of the shaft 3 has a thrust mounting. A pulley 6 is secured to the upper end of the shaft 3 and is adapted to be driven by means of a belt 7 from any suitable source of power. The upper portion of this pulley 6 is enlarged forming a table 8 on which a grinding or polishing wheel or disk 9 is removably supported. This disk or wheel 9 has a central opening 10 to receive the inverted upper end 11 of shaft 3, and a nut 12 is screwed onto the threaded end of the shaft with a washer 13 interposed between the nut and the wheel or disk 9 to securely clamp the latter on the table 8.

The base 1 at one side is formed with a groove 14 constituting a guide for a vertical adjustable plate 15. This plate 15 is secured at the desired adjustment by means of a set screw 16 projected through a slot 17 in the plate 15 and screwed into a threaded socket 18 in block 1. A tool guide 19 is pivotally connected at its lower end to the plate 15 by means of a screw 20, a washer 21 being preferably interposed between the head of the screw and the guide 19, and the end of the screw projecting into the plate 15 to hold the parts against displacement but to permit lateral swinging or pivotal movement of the guide 19.

This guide 19 is provided adjacent its free end with a spring pressed manually operable plunger 22 adapted to engage in any of a series of openings 23 in plate 15 so as to hold the guide in any position of angular adjustment. The upper end of the guide 19 is formed with a recess 24 in which a tool 25 is located and supported and guided while the end thereof rests upon the wheel or disk 9 for honing or sharpening so that the guide serves to maintain the tool in proper angular position relative to the disk or wheel 9 and insure an accurate sharpening. The recess 24 is preferably shaped to conform to the cross-sectional shape of the tool 25 so as to prevent turning movement, and as such tools are ordinarily angular in shape the recess 24 will be correspondingly V-shape in elevation.

Various slight changes and alterations might be made in the general form of the parts described without departing from my invention, and hence I do not limit myself to the precise details set forth but consider myself at liberty to make such slight changes and alterations as fairly fall within the spirit and scope of the appended claim.

I claim:

An apparatus of the character described,

comprising a solid block constituting a base having a vertical bore therein, a shaft mounted to turn in said bore, a plug in the lower end of the bore, an anti-friction bearing interposed between the plug and the lower end of the shaft, a pulley fixed to the upper end of the shaft and having an enlarged upper portion constituting a table adapted to support a disk or wheel, the upper extremity of said shaft above the table being screw-threaded, and a nut on said upper end adapted to clamp the wheel or disk on the table.

EDWIN MERRITT ANDRUS.