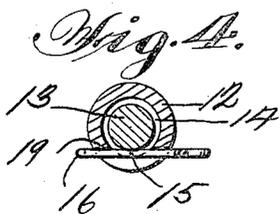
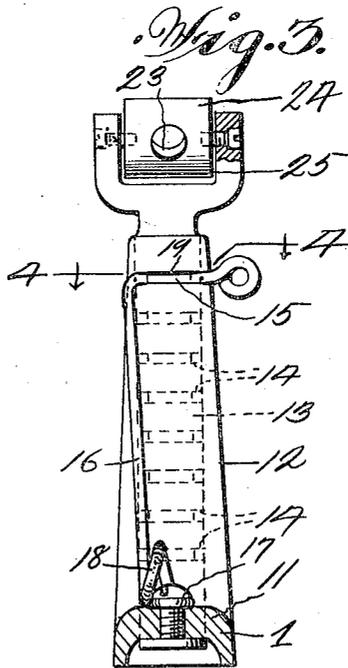
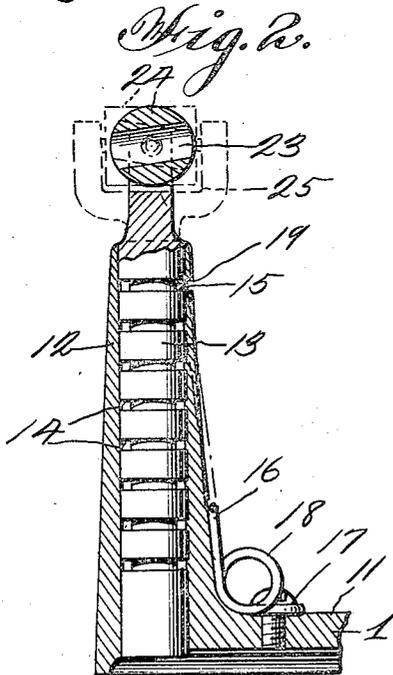
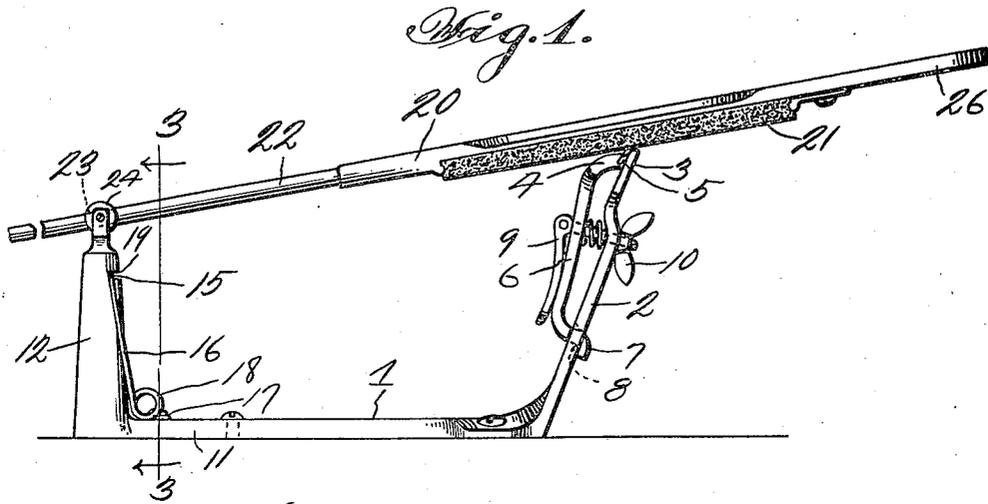


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O. F. DOWNEY ET AL
SHARPENING MACHINE FOR SHEARS

Filed Sept. 14, 1922



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UNITED STATES PATENT OFFICE.

OSCAR F. DOWNEY AND CYRIL L. BENSON, OF CHESTNUT, ILLINOIS.

SHARPENING MACHINE FOR SHEARS.

Application filed September 14, 1922. Serial No. 588,155.

To all whom it may concern:

Be it known that we, OSCAR F. DOWNEY, and CYRIL L. BENSON, citizens of the United States, residing at Chestnut, in the county of Logan, State of Illinois, have invented a new and useful Sharpening Machine for Shears; and we do hereby 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.

The invention relates to shear sharpening machines and has for its object to provide a device of this character comprising a base, upwardly extending clamping member for holding a shear blade and a reciprocating member having a grinding element disposed above the clamp. One end of the reciprocating member extends through a vertically rockable guide member, which guide member is horizontally disposed and pivotally mounted in the upper end of a vertically disposed rotatable shaft, thereby forming a universal support whereby the reciprocating member may be moved transversely or vertically.

A further object is to mount the vertically disposed shaft in a sleeve carried by the base and to provide means whereby said shaft may be adjusted upwardly or downwardly and held in adjusted position so that the same may rotate. Also to provide the spring member extending through an opening in one side of the sleeve and adapted to be received in any of a plurality of annular channels in the shaft for holding the shaft in various vertical positions, at the same time allowing the shaft to rotate.

A further object is to provide a quickly adjustable standard for a shear sharpening machine, and to render more practicable to adjusting means set forth in our application Ser. No. 566,185, filed June 5th, 1922.

With the above and other objects in view the invention resides in the combination and arrangement of parts as hereinafter set forth, shown in the drawing, described and claimed, it being understood that changes in the precise embodiment of the invention may be made within the scope of what is claimed without departing from the spirit of the invention.

In the drawing:

Figure 1 is a side elevation of the shear sharpening machine.

Figure 2 is a vertical longitudinal sectional view through the forward end of the machine, showing the adjustable rod guide.

Figure 3 is a vertical transverse sectional view through the machine taken on line 3—3 of Figure 1.

Figure 4 is a horizontal sectional view through the rod supporting post taken on line 4—4 of Figure 3.

Referring to the drawing, the numeral 1 designates the base of the shear sharpening machine, 2 an upwardly extending arm which terminates in a jaw 3, and between the jaw 3 and a clamping jaw 4 the blade of a pair of shears is securely held. The clamping jaw 4 is provided with a downwardly extending arm 6, the lower end of which is provided with a lug 7, which extends through an aperture 8 in the arm 2, which forms a pivotal point for the arm 6. The arm 6 and the jaw 4 are forced inwardly by means of the cam lever 9 which extends through the arms 6 and 2 and is provided with a thumb nut 10.

Extending upwardly from the forward end 11 of the base 1 is a sleeve 12, and rotatably mounted in said sleeve is a vertically disposed shaft 13, which shaft is provided with a plurality of annular grooves 14. The shaft 13 is held in various vertical adjusted positions by means of the transversely disposed portions 15 of the spring arm 16, which spring arm is anchored to the base 1 at 17 and is provided with a convolution 18, thereby allowing a great range of movement of the spring arm 16 when the transversely disposed portion 15 thereof is moved outwardly out of the transversely disposed slot 19 in the sleeve 12 for adjusting the rotatable vertical shaft 13 to a different position. It will be seen that the shaft 13 is free to rotate and that the portion 15 of the spring arm 16 will prevent the shaft from upward or downward movement, thereby allowing the reciprocating sharpening frame to be moved from side to side by the operator so that the abrading member may be moved to various positions on the blade 3. The reciprocating member 20 is provided with a guide rod 22, the forward end of which guide rod is slidably mounted in the transversely disposed bearing 23 of the horizontally pivoted bearing block 24, which bearing block is pivotally mounted in a bifurcation 25 of the vertically

disposed shaft 13, therefore it will be seen that the guide rod 22 is universally supported and consequently by adjusting the shaft 13 to various positions the sharpening bevel of the blade 3 may be varied according to the edge desired or according to the angle of the edge. It will also be seen that when the operator grasps the handle 26 that he has complete control of the reciprocating member 20 in its vertical or side-wise movement, and consequently can position the abrading member 21 anywhere on the blade of the shears as well as vary the pressure thereon. It will also be seen that the bearing block 24 may be easily and quickly adjusted upwardly and downwardly by simply pulling outwardly on the portion 15 of the spring arm 16 and moving the shaft 13 to the desired position, and allowing the portion 15 to move under the influence of the spring arm 16 into engagement with one of the annular channels 14 of the shaft 13.

The invention having been set forth what is claimed as new and useful is:—

1. The combination with a shear sharpening machine comprising a base, a stone carrying frame disposed above said base, a shear clamp carried by the base and disposed beneath the frame, said frame being provided with a guide rod, of means for universally supporting said guide rod as the frame is reciprocated, said means comprising a vertically disposed sleeve carried by the base, a rotatable vertically disposed

shaft in said sleeve and provided with a plurality of horizontally disposed annular channels, a spring arm carried by the base, a transversely disposed arm carried by the spring arm and adapted to extend through an opening in the sleeve and be received in one of the channels of the shaft, a horizontally disposed and pivoted bearing block carried by the upper end of the shaft and in a bearing of which the guide rock is slidably mounted.

2. The combination with a manually operated shear sharpening machine having a reciprocating frame guided at one end by a guide rod, of means for supporting said guide rod, said means comprising a vertically disposed sleeve, a rotatable shaft mounted in said sleeve and vertically disposed, a horizontally disposed pivoted bearing block carried by the upper end of the shaft and in a bearing of which the guide rod is slidably mounted and a spring member extending through an opening in the sleeve and adapted to be received by annular grooves in the shaft, for holding said shaft in various vertically adjusted positions.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

OSCAR F. DOWNEY.
CYRIL L. BENSON.

Witnesses:

W. G. SMITH,
J. H. McFAYDEN.