Sept. 9, 1930. S. FRYCKBERG 1,775,124

EMERY WHEEL DRESSER

Filed Aug. 30, 1929

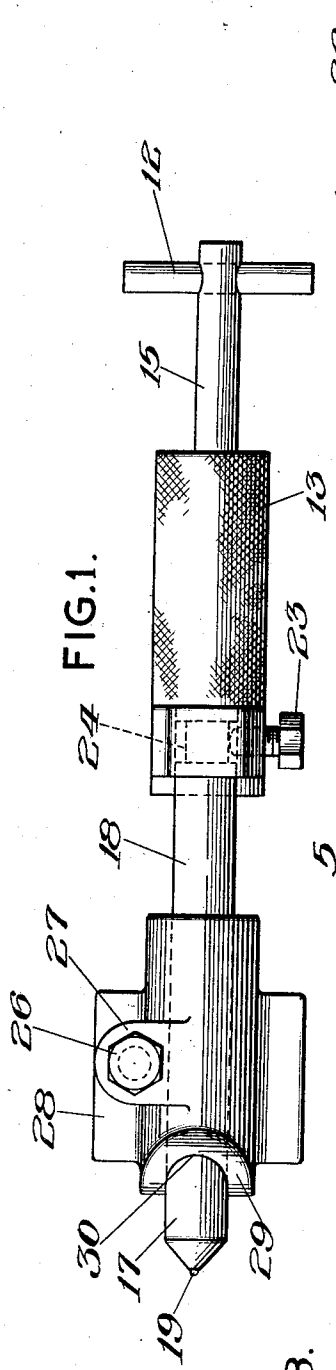


FIG. 1.

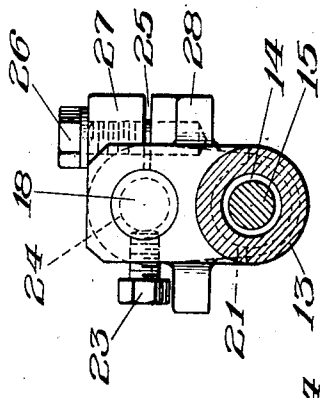


FIG. 2.

FIG. 3.

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UNITED STATES PATENT OFFICE

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EMERY-WHEEL DRESSER

Application filed August 30, 1929. Serial No. 389,445.

This invention relates to a grinding wheel dresser.

The dresser is particularly adapted for truing the grinding wheels of grinding machines in which the wheel is movable axially or which has a carriage which is movable axially of the wheel.

An object of the invention is to provide a compact and efficient grinding wheel dresser.

Another object is to provide a grinding wheel dresser which may be secured to a support arranged in close proximity to the grinding wheel to be dressed.

Another object is to provide a grinding wheel dresser which may be readily and economically manufactured.

According to the invention, the screw which clamps the dresser to a support also forms a part of the feeding mechanism.

An opening is preferably provided to permit inspection of the work when the dresser is clamped to a support which is arranged close to the wheel to be dressed.

A grinding wheel dresser embodying the invention is shown in the accompanying drawing in which the views are as follows:

Fig. 1 is a top plan view.

Fig. 2 is a section on the line 2—2 of Fig. 3.

Fig. 3 is a side elevation of the dresser, showing the same arranged in position upon a grinding machine which is shown in central section.

Only a part of the grinding machine has been illustrated as the same is similar to that shown in my copending application, Serial No. 366,480, filed May 27, 1929.

The machine has a grinding wheel 1 secured by washers 2 to a spindle 3 which is journalled in a bearing 4.

The grinding wheel is rotated and moved axially by mechanism (not shown) carried by the frame 5 which has an opening 6 in the bottom thereof, through which the wheel 1 is advanced to grind cylinders and the like, and a lateral opening 7 to provide access to the grinding tool and the work.

The grinding wheel dresser has a guide 8 which is provided at the forward end thereof with a lug 9 to engage one side of a support, such as the frame 5, and at the rear end thereof with a lug 10.

A screw 11 is threaded through the lug 10 and provided at the rear end thereof with a handle 12 by means of which the same may be rotated to bring the forward end thereof into engagement with the opposite side of the support or frame 5 and clamp the guide 8 thereto.

A sleeve or feed nut 13 is threaded on the screw 11 and preferably provided with a counter-bore 14 to accommodate the unthreaded part 15 of the screw 11.

The guide 8 has a bore 16 to receive the stem 17 of a dressing tool 18 which carries an abrading element 19, such as a diamond, at the forward end thereof.

The dressing tool 18 has a feed block 20 arranged at the rear of the stem 17 and provided with a convex lower end 21 to fit into a groove 22 in the sleeve 13.

The feed block 20 and the stem 17 may be formed integral but the feed block is preferably carried by the stem and secured thereon by a bolt 23 which is threaded in the block and engages the bottom of a groove 24 formed in the stem, so that the stem may be rotated to bring different faces of the abrading element 19 into engagement with the wheel 1.

The guide 8 has a slit 25 extending the length thereof and intersecting the bore 16 to permit the stem 17 to be clamped therein by a bolt 26 which extends through a lug 27 and is threaded into the base 28 of the guide.

The forward end 29 of the guide 8 slopes rearwardly from approximately the centerline of the bore 16 and is provided with a semi-circular opening 30 to expose the abrading element 19 when the same is retracted to its rearmost operative position.

In dressing the wheel of a grinding machine, such as that shown in Fig. 3, the guide 8 is extended through the opening 7 and clamped to the frame 5 by turning the screw 11, the machine started, the wheel 1 brought opposite the abrading element 19 and the sleeve 13 rotated until the abrading element starts cutting the periphery of the wheel.

The sleeve 13 prevents the dressing tool 18

from backing away from the work but the bolt 26 and the slit 25 are provided so that the stem 17 may be firmly clamped in the guide 8 and the dressing tool prevented from vibrating.

The grinding wheel is moved across the abrading element 19 until all parts of the periphery of the wheel are trued.

The invention herein set forth is susceptible of various modifications and adaptations without departing from the scope thereof as hereafter claimed.

The invention is hereby claimed as follows:

1. A grinding wheel dresser comprising a guide, a screw to clamp said guide to a support, a dressing tool carried by said guide, and a feed nut threaded on said screw and connected to said tool to move the same in said guide.

2. A grinding wheel dresser comprising a guide, a screw to clamp said guide to a support, a dressing tool carried by said guide, a feed nut threaded on said screw and connected to said tool to move the same in said guide, and a bolt to clamp said tool in selected positions in said guide.

3. A grinding wheel dresser comprising a guide, a screw to clamp said guide to a support, a cylindrical tool stem arranged in said guide to slide therein, a diamond carried by said stem, and a feed nut threaded on said screw and connected to said stem to move the same in said guide.

4. A grinding wheel dresser comprising a guide, a screw to clamp said guide to a support, a sleeve threaded on said screw and provided with a groove in the periphery thereof, and a dressing tool arranged in said guide to slide therein and having a part thereof engaging said groove.

5. A grinding wheel dresser comprising a guide, a screw to clamp said guide to a support, a sleeve threaded on said screw and provided with a groove in the periphery thereof, a dressing tool arranged in said guide to slide therein and having a part thereof engaging said groove, and a bolt to clamp said tool in selected positions in said guide.

6. A grinding wheel dresser comprising a guide, a screw to clamp said guide to a support, a sleeve threaded on said screw, a tool stem arranged in said guide to slide therein, an abrading element carried by said stem, and a feed block fixed to said stem and connected to said sleeve to be moved thereby.

7. A grinding wheel dresser comprising a guide, a screw to clamp said guide to a support, a sleeve threaded on said screw and provided with a groove in the periphery thereof, a tool stem arranged in said guide to slide therein, an abrading element carried by said stem, and a feed block fixed to said stem and having a concave surface engaging said groove.

8. A grinding wheel dresser comprising a guide having a cylindrical bore and spaced lugs arranged at an angle thereto, a screw threaded through one of said lugs to clamp said guide to a support, a sleeve threaded on said screw and provided with a groove in the periphery thereof, a dressing tool arranged in said bore to slide therein and having a feed block fixed thereon and provided with a concave surface to engage said groove, and a bolt to clamp said tool in selected positions in said guide.

9. A grinding wheel dresser comprising a guide having a bore therein and an opening in the forward end thereof intersecting said bore, a screw to clamp said guide to a support, a dressing tool arranged in said bore, and a feed nut threaded on said screw and connected to said tool to move the same in said guide.

In witness whereof, I have hereunto subscribed my name.

SAMUEL FRYCKBERG.