Sept. 3, 1957 C. A. COUP 2,804,868

DRESSING DEVICE FOR GRINDING WHEELS

Filed Dec. 29, 1954 2 Sheets-Sheet 1

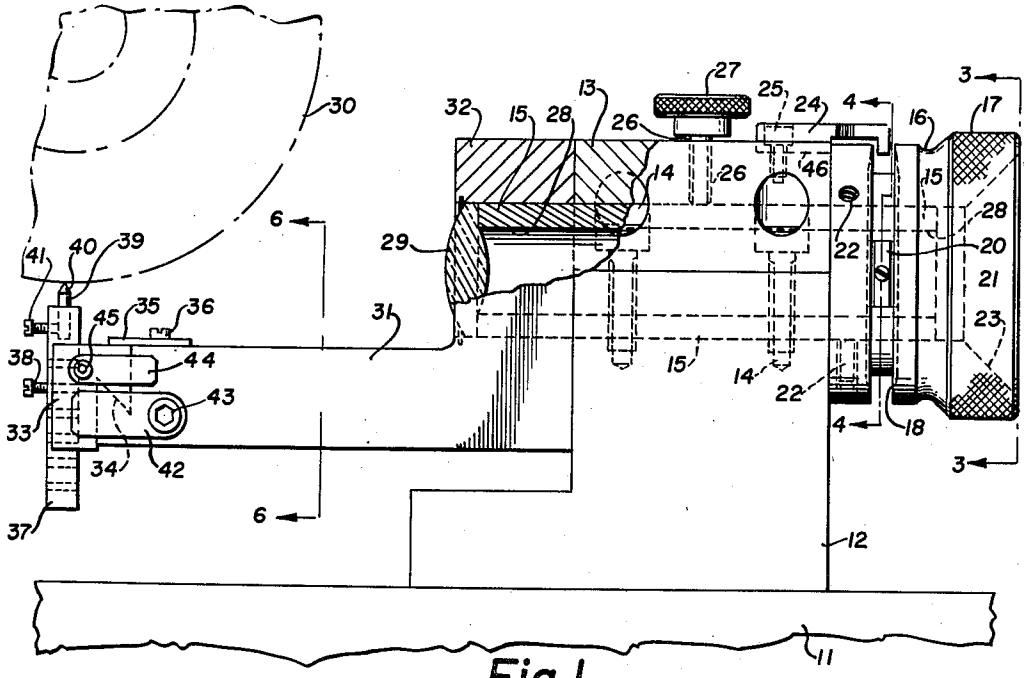


Fig.1

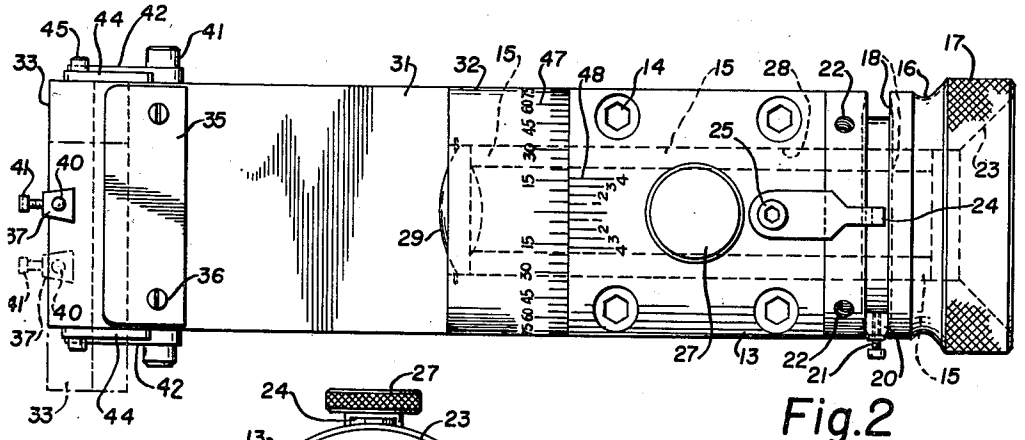


Fig.2

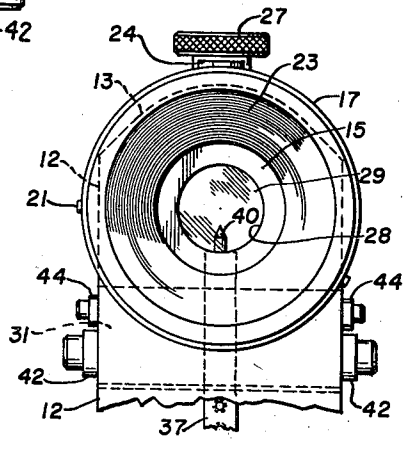


Fig.3

INVENTOR.
CLARENCE A. COUP

BY

Woodling and Krost attys.

Sept. 3, 1957 C. A. COUP 2,804,868

DRESSING DEVICE FOR GRINDING WHEELS

Filed Dec. 29, 1954 2 Sheets-Sheet 2

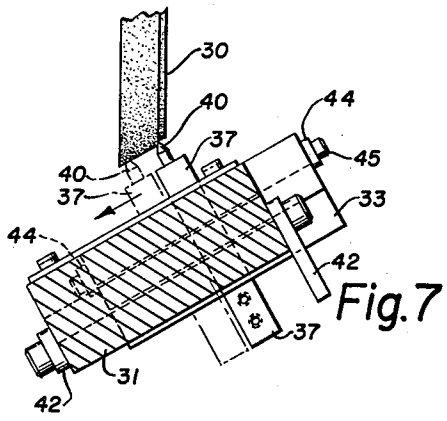


Fig.7

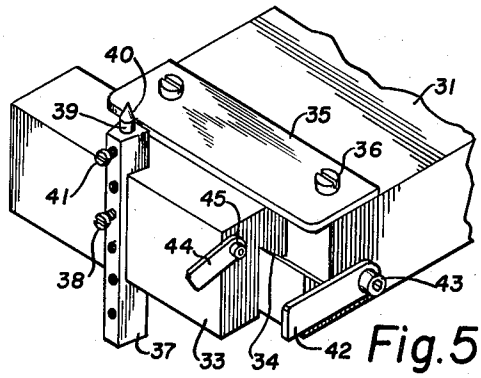


Fig.5

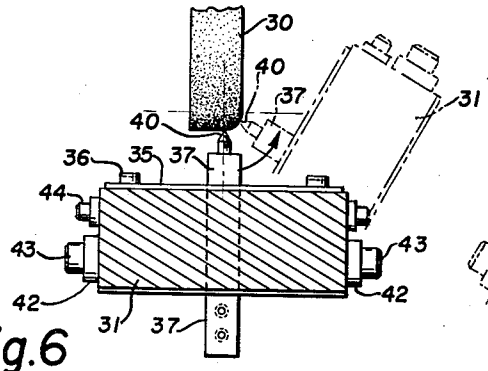


Fig.6

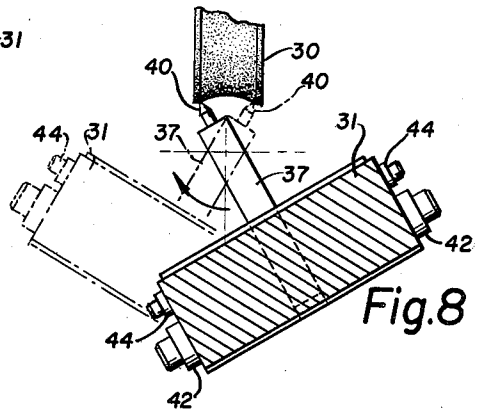


Fig.8

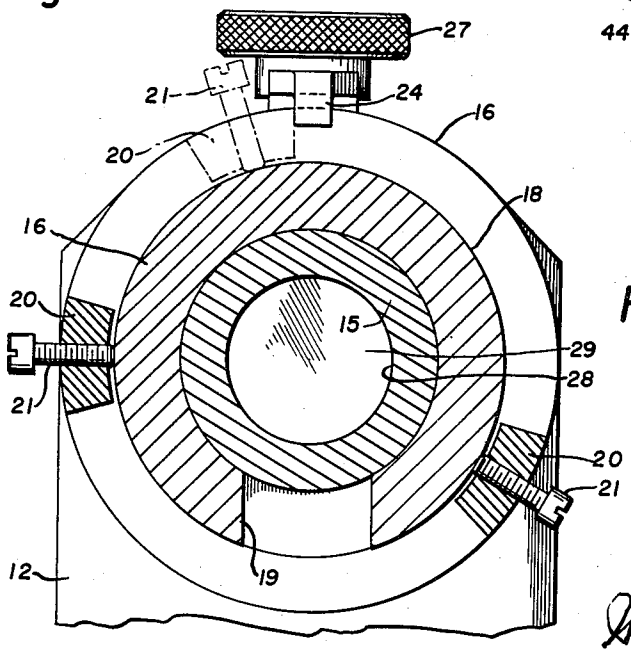


Fig.4

INVENTOR.
CLARENCE A. COUP
BY
Woodling and Kroat attys

United States Patent Office 2,804,868 Patented Sept. 3, 1957

2,804,868

DRESSING DEVICE FOR GRINDING WHEELS

Clarence A. Coup, Meadville, Pa.

Application December 29, 1954, Serial No. 478,265

9 Claims. (Cl. 125—11)

My invention relates to dressing devices for grinding wheels of abrasive material.

An object of my invention is to provide a proper support for the dressing tool, such as a diamond point, used in dressing or forming the contour of a grinding wheel of abrasive material.

Another object is the provision of an improved device for supporting the dressing tool in proper position relative to a grinding wheel to be dressed.

Another object is an arrangement in a supporting device for a tool which provides for ready visual inspection of the tool at its position for dressing a grinding wheel.

Another object is to provide a line of sight through a support to permit the dressing tool to be properly observed during its positioning relative to a grinding wheel.

Another object is the provision for accurately aligning and positioning a dressing tool carried by a support.

Another object is the provision for accurate positioning and movement of a dressing tool relative to a grinding wheel.

Another object is to provide an arrangement for a minimum of parts providing a maximum of flexibility in the operation of the device.

Another object is to provide precision and universal manipulation in the use of a dressing tool.

Another object is to provide results heretofore not obtainable and in a new and beneficial manner.

Other objects and a fuller understanding of my invention may be had by referring to the following description and claims, taken in conjunction with the accompanying drawings, in which:

Figure 1 is a side elevational view of a device embodying my invention with portions cut away in section;

Figure 2 is a top plan view of my device as shown in Figure 1;

Figure 3 is an end view of my device looking in the direction of the arrows 3—3 of Figure 1;

Figure 4 is an enlarged sectional view taken through the line 4—4 of Figure 1;

Figure 5 is a perspective view of the left-hand or free end of the tool-carrying arm of my device;

Figure 6 is a cross-sectional view of my device looking in the direction of the arrows 6—6 of Figure 1;

Figure 7 is a view somewhat like that of Figure 6 but showing the tool-carrying arm swung at an angle to its horizontal position shown in Figure 6 and illustrates another dressing operation in the use of my device; and

Figure 8 is a view also somewhat similar to the view of Figure 6 but showing the tool-carrying arm disposed at an angle to its horizontal position of Figure 6 and illustrates still another dressing operation which may be performed with my device.

As is well known, grinding wheels of abrasive material must be periodically dressed or formed along their outer peripheral portion so that the grinding wheel presents the proper profile for a grinding operation. This dressing or forming of the grinding wheel is performed by the use of a tool, usually a piece of diamond referred to as a

diamond point, which must be properly held in position relative to the grinding wheel during the dressing operation. My device is adapted to perform a number of different operations and variations in dressing a grinding wheel and also provides for accuracy and ease in manipulation.

With reference to the views of the drawings, my device embodies a supporting member 12 which is bolted or otherwise secured to a supporting structure 11. The supporting structure 11 may appropriately be a magnetic chuck for magnetically holding the supporting member 12 securely in position. The upper portion of the supporting member 12 consists of a yoke or top portion 13 which is secured to the lower portion of the supporting member by four bolts 14. The upper portion of the supporting member 12 and the yoke 13 together define or form a cylindrical bore or opening extending horizontally therethrough.

A rotatable sleeve member 15 of an outside diameter complementing the inner diameter of the bore extending through the supporting member is positioned in the bore to extend from its opposite ends. The fit of the rotatable sleeve member 15 in the supporting member is such as to permit rotation of the sleeve member 15 while accurately maintaining its alignment in a straight horizontal direction. Secured to the rear end of the sleeve member 15, that is, at the right-hand end shown in Figures 1 and 2, is an annular end piece 16. This annular end piece is securely engaged to the sleeve member 15 by set screws 22. The annular end piece 16 is thus secured to the sleeve member 15 so that the annular end piece and sleeve rotate together as though integral. The outer rear end of the end piece 16 is knurled as at 17 to provide a convenient hand-engaging portion which may be seized by hand to rotate the end piece 16 and all parts rotatable therewith. The end piece 16 also has an opening extending therethrough concentric with the open bore 28 which extends through the sleeve member 15. The rear end of the end piece 16 is champfered to form a sloping end face 23.

The annular end piece 16 has an annular groove 18 extending therearound. This groove 18 is wider at its bottom than it is at its outer opening, the side walls thereof being at an incline to each other so as to converge as the side walls extend radially outward of the end piece. Positioned in the groove 18 are a pair of wedge blocks 20. These wedge blocks 20 each have opposed sloping walls which complement the inclined side walls of the groove 18. Each wedge block 20 has a threaded bolt 21 extending therethrough in a radial direction. Upon tightening of a threaded bolt 21 so as to bear hard against the bottom wall of the groove 18, the respective wedge block carried thereby is wedgingly forced up in tight engagement with the inclined side walls of the groove 18. By such tightening of the bolt 21, a wedge block 20 may be locked in a predetermined position around the circumferential extent of the groove 18.

To allow for the insertion of the wedge blocks 20 in the groove 18, there is provided in the end piece 16 a radially extending slot 19 having a cross-section slightly larger than the maximum cross-section of each block 20. As better shown in Figure 4, this slot 19 permits the wedge blocks 20 to be moved radially outward through the slot 19 into the groove 18 prior to the mounting of the end piece 16 on the sleeve member 15. In Figure 4, which shows the parts enlarged, the variable positioning of the wedge blocks 20 in the groove 18 is illustrated.

A fixed stop finger 24 is mounted to the top of the yoke 13 adjacent the end piece 16. The stop finger 24 is accommodated in a recess 46 and it is secured to the part 13 by a bolt 25. As seen in Figures 1, 2 and 4, the fixed stop finger 24 at its rearward end extends down some-

what into the groove 18. By this arrangement, the fixed stop finger 24 provides a reference and the wedge blocks 20 provide variable limits. By adjustment of the position of the wedge blocks 20 in the groove 18 of the end piece 16, a limit of rotational movement may be provided in that the finger 24 stops further rotation of the end piece 16 when a wedge block 20 abuts the finger 24. By having two wedge blocks 20 and having them positionable in different circumferential locations, a variety of limiting arrangements may be provided. This permits rotation of the end piece and parts carried thereby in a predetermined arc about the axis of the device.

There is provided in a threaded opening in the yoke 13 a threaded bolt 26 so arranged that its inner end may about the outer surface of the sleeve 15. A knurled head 27 on the threaded bolt 26 permits the manual turning of the bolt 26 so as to tighten or loosen the bolt 26 and thus to engage or disengage the sleeve 15. Upon loosening of the bolt 26, the sleeve 15 of the parts carried thereby may rotate in the bore of the supporting member. Upon tightening of the bolt 26, the sleeve 15 may be held in any determined rotational position.

It is to be noted that my device has a clear line of sight extending through the rotational sleeve member 15 and the end piece 16 secured thereto. This line of sight extends along the axis of rotation of the sleeve member 15. The inner wall of the bore 28 is concentric with this axis of rotation.

A tool-carrying arm 31 extends forwardly from the support member 12. This tool-carrying arm 31 has an upright angle portion 32 which has a bore registering with the horizontal bore through the support member and which also accommodates the sleeve member 15. The angle portion 32 of the tool-carrying arm 31 is firmly secured by brazing or other suitable securing means to the forward end of the sleeve member 15 so that the angle portion 32 revolves with the sleeve member 15 as though integral therewith.

Preferably I provide a magnifying lens 29 at the forward end of the sleeve member 15, the axis of the lens coinciding with the axis of rotation of the sleeve member. This magnifying lens 29 is aligned therefore on the line of sight through the device and provides for magnification of the object viewed through the line of sight from the rear end of the device, that is, from adjacent the end piece 16. A snap ring 49 or other suitable means is provided for retaining the magnifying lens 29 in position.

At the free end of the tool-carrying arm 31, that is, at the left-hand end of the views of Figures 1 and 2, a cross-slide member 33 is provided. The forward end face of the tool-carrying arm 31 and the rearward opposed face of the slide member 33 are so milled or formed as to have angled opposing surfaces 34. The angle of the opposed surfaces 34 is approximately 45 degrees from the horizontal plane when the parts are in the position shown in Figures 1 and 2. The interfit and engagement of the slide member 33 and arm member 31 is such that the slide member 33 may be accurately but freely moved transversely across the longitudinal axis of the tool arm 31.

To secure the slide member 33 in interlocked arrangement with the tool arm 31, there is provided a retaining plate 35 secured by bolts 36 to the tool-carrying arm 31 as better illustrated in Figure 5. This plate 35 overlays the slide member 33 in such manner as to permit the sliding movement of the member 33 while holding the parts in interengagement. There is a vertically disposed groove in the forward end of the horizontally disposed slide member 33 and positioned in this vertical groove is a tool-holding post 37. A screw bolt 38 extending through a hole in the tool-holding post 37 secures the tool-holding post 37 to the slide member 33 and at a fixed position relative thereto. To provide for variation in the position of the tool-holding post relative to the transverse slide member 33, there are a plurality of openings, five openings being shown, to permit the screw bolt 38 to be placed in any one of the desired openings. The screw bolt extends through a selected one of the five selectable openings in post 37 in non-threaded engagement with post 37 and extends in threaded engagement with a complementary threaded opening in slide member 33. Thus, the elevation of the tool holding post 37 may be adjusted relative to the transverse slide member 33.

A diamond point or piece 40 is secured to and carried by a diamond-carrying member 39 in the usual manner. This diamond point 40 on the diamond-carrying member 39 provides a tool for cutting in the abrasive material of a grinding wheel and thus for the dressing of a grinding wheel. The diamond-carrying member 39 is secured in an opening in the top end of the tool-holding post 37 by a screw bolt 41. Worn diamond tools may be replaced on the post 37 by loosening of the screw bolt 41 and replacement of the worn tool comprised of the diamond point 40 on its carrying member 39.

To provide limits to the transverse movement of the slide member 33 relative to the arm 31, there are provided stop latches 42 which are pivotally carried by screw bolts 43 on the opposite sides of the arm 31. By swinging of one of the two stop latches 42 in a horizontal position, such as shown in Figure 1, a stop is provided for transverse sliding movement of the slide member 33 upon the abutment of the slide member against the horizontally arranged stop latch 42. A stop latch 42 may be swing in a vertical position out of the path of the slide member 33 so as to permit movement of the slide member 33 without limit on that side of the arm 31. By having stop latches 42 on the opposite sides of the arm 31, limits may be selectably provided for transverse movement of the slide member 33 in a desired direction.

There are also provided swingable end plates 44 which are pivotally secured to the opposite ends of the transverse slide member 33, these end plates 44 being pivotally carried by screw bolts 45 secured to the opposite ends of the slide member 33. These end plates 44 may be swung forwardly in a generally horizontal position to provide hand-engaging means for the operator moving the slide member 33 in a transverse path. Also as desired, the end plates 44 may be swung to the horizontal position shown in Figure 1 and in this position the slide member 33 is locked in position by the abutment of the end plate 44 against the side of the arm 31.

To provide for the setting of the tool-carrying arm 31 at a predetermined and desired position, there are provided marked calibrations 47 on the top surface of the angle portion 32 of the arm 31, and there are also provided calibrations 48 marked on the upper surface of the yoke 13 of the support member 12. By adjustment of the lines of the calibrations 47 with reference to the lines of the calibrations 48, the device may be adjusted to hold the tool-carrying arm at a desired angularity and the parts may be locked in the selected position by tightening of the bolt 26 against the surface of the sleeve member 15. If it is desired to have the tool-carrying arm readily revolve relative to the axis of rotation of the sleeve member 15, the bolt 26 is loosened and the tool-carrying arm may be manually revolved around this axis.

It is seen from the views of the drawings, and particularly in Figures 1, 2, and 3, that the operator using my device may properly position the diamond point 40 relative to the grinding wheel 30 by looking through the open bore of my device along the axis of rotation. The operator would look from right to left in Figure 1 from adjacent the open end of the end piece 16 and look toward the diamond point 40 through the magnifying lens 29. The arrangement permits the accurate positioning of the dressing tool 40 and permits a good visual inspection from an advantageous point at all times during the operation. The field of vision is sufficiently large to permit observation of the diamond point, constituting

the dressing tool, in a variety of its positions, as for example, the various positions shown in Figures 6, 7 and 8. As seen in Figure 3, the line of sight is clear by reason of the opening through the device along its axis and the magnifying lens **29** provides the advantage of magnification, as well as the clear view along the line of sight.

To illustrate some of the operations that may be readily performed with my device, I show in Figure 6 that by rotation of the arm **31** from its horizontal position shown in full lines to an inclined position shown in broken lines, a desired radius may be formed on the peripheral surface of a grinding wheel, such as grinding wheel **30**. In shaping such a radius on the grinding wheel **30**, the diamond point **40** is positioned below the axis of rotation of the device. In Figure 6, the axis of rotation would coincide with the point of intersection of the vertical and horizontal lines shown extending through the grinding wheel **30**.

In Figure 7, there is illustrated the operation of providing a peripheral surface on the grinding wheel **30** which is at an angle for part of the thickness of the grinding wheel **30** and which is also provided with a stepped portion adjacent one side of the grinding wheel. The angular dressing of the grinding wheel **30** is provided by motion of the slide member **33** and the diamond point **40** carried thereby transversely of the arm **31**, while the arm **31** is locked in the angular position shown. This movement of the slide member **33** moves the diamond point in the desired angular path. By adjustment of the position of the tool-holding post **37** relative to the slide member **33** so as to move the diamond point toward the center of the grinding wheel **30**, and thereafter by motion of the slide member **33** in the same angular direction, the desired step formation in the grinding wheel may be obtained.

Another operation that may be performed with my device is illustrated in Figure 8, in which a concave or depressed surface is provided in the peripheral portion of the grinding wheel **30**. In this operation, the tool-holding post **37** is adjusted so as to move the diamond point **40** upwardly away from the arm **31** and beyond the axis of rotation of the device. In Figure 8, the axis of rotation coincides wtih the point formed by the intersecting lines, of which one line extends radially of the grinding wheel **30** and the other line at right angles thereto extends through the tool-holding post **37**. With the diamond point in this extended position, the arm **31** is revolved around the axis of rotation from the position shown in full lines to the position shown in broken lines and back again in that reciprocating movement. This movement of the diamond point **40** against the grinding wheel **30** forms the contour shown in Figure 8.

The above operations are given only by way of example of some of the many operations that may be performed with my device. It is seen that compound movements may be readily obtained with a maximum of accuracy and with facility in performing the operation.

It has been found in practice that my device, although simple and economical in construction, provides superior results and performs a plurality of operations in an efficient manner.

The present disclosure includes that contained in the appended claims, as well as that in the foregoing description.

Although this invention has been described in its preferred form with a certain degree of particularity, it is understood that the present disclosure of the preferred form has been made only by way of example and that numerous changes in the details of construction and the combination and arrangement of parts may be resorted to without departing from the spirit and scope of the invention as hereinafter claimed.

What is claimed is:

1. A grinding wheel-dressing device comprising the combination of a supporting member, said supporting member having a bore extending therethrough, a sleeve member mounted on said supporting member and coaxially with said bore, said sleeve member being adapted to be rotated on the common axis of the said bore and sleeve member, said sleeve member extending from opposite ends of the bore of said supporting member and having a straight opening extending therethrough from end to end along said axis to provide a line of sight through the sleeve member, a tool-carrying arm carried by the sleeve member at one end of the sleeve member to revolve therewith and off-set to one side only of the said common axis to continue said line of sight without obstruction by said tool-carrying arm, an annular hand-engaging member circumferentially arranged around said sleeve member adjacent the other end of the sleeve member and secured thereto for the rotation of the sleeve member and tool-carrying arm carried thereby on said common axis, said annular member having an annular groove arranged around the periphery thereof, a pair of wedge blocks adjustably positioned in said groove, a finger-like stop member secured to said supporting member adjacent said annular member, said finger-like stop member having a portion which projects into said annular groove and which co-operates with the wedge blocks therein to limit the rotation of said sleeve member to a predetermined arc, a slide member slidably carried at the free end of said tool-carrying arm at a location spaced from said axis and movable at said free end in a path tangential to a circle generated about said axis, a tool mounting-post carried by said slide member for extending a dressing tool to a location proximate to said line of sight, and means for adjustably securing the sleeve member in fixed rotative position relative to said supporting member.

2. A grinding wheel-dressing device comprising the combination of a supporting member, a rotatable member rotatably carried by said supporting member, said rotatable member having an opening extending therethrough along the axis of rotation of said rotatable member to provide an open line of sight along said axis, tool-mounting means carried by said rotatable member adjacent one end of said rotatable member to hold a tool in dressing position, said tool-mounting means being movable with said rotatable member to swing in an arc on said axis, said tool-mounting means extending radially away from said axis, thence forwardly away from said supporting member substantially parallel to said axis to a forward free end, and thence toward said axis, said tool-mounting means, including slide means at said forward free end for effecting a dressing movement of a dressing tool along a path tangential to a circle generated on said axis, said open line of sight providing for inspection from the other end of said rotatable member of said dressing tool carried by said tool-mounting means in dressing position, an annular hand-engaging member carried by said rotative member for rotating said rotative member on said axis to move said tool-mounting means relative to said axis, said annular member having an annular groove arranged around the periphery thereof, a pair of wedge blocks adjustably positioned in said groove, a finger-like stop member secured to said supporting member adjacent said annular member, said finger-like stop member having a portion which projects into said annular groove and which co-operates with the wedge blocks therein to limit the rotation of said rotatable member to a predetermined arc, and locking means carried by the supporting member for locking said rotative member in a selected position of a plurality of selectable positions of the rotative member relative to the supporting member.

3. A device for holding a grinding wheel-dressing tool in position comprising in combination support means, rotative means rotatably carried by said support means, said rotative means being open therethrough along the

axis of said rotative member to provide a line of sight along said axis from one side to the other side of said support means, tool-carrying means carried by said rotative means adjacent one end thereof and which is adapted to move therewith in an arc about said axis and off-set from said axis to revolve with the rotative means relative to said axis, said tool-carrying means including tool-engaging means adapted to hold a dressing tool in dressing position along said line of sight, said tool-carrying means being arranged to hold said tool-engaging means at a spaced axial distance from said rotative means to accommodate a grinding wheel along said line of sight in advance of said rotative means and being arranged to one side of said axis to maintain unobstructed said line of sight between said rotative means and a dressing tool engaged by said tool-engaging means, said tool-carrying means having inter-sliding portions permitting movement of said tool-engaging means at said spaced axial distance tangentially of a circle generated on said axis, an annular member carried by said rotative means and secured thereto adjacent the opposite end thereof and which is adapted to rotate therewith, said annular member having an annular groove arranged around the periphery thereof, a pair of wedge blocks adjustably positioned in said groove, a finger-like stop member secured to said supporting member adjacent said annular member, said finger-like stop member having a portion which projects into said annular groove and which co-operates with the wedge blocks therein to limit the rotation of said rotative means to a predetermined arc, and locking means for securing said rotative means in a selected fixed rotative position relative to said support means to hold said tool-carrying means at a selected direction from said axis.

4. The combination of a supporting member having a cylindrical bore extending therethrough, a cylindrical member in said bore and extending from opposite ends thereof, said cylindrical member being reciprocal in an arc about the axis of said bore, said cylindrical member being open along said axis to provide a line of sight therethrough from adjacent the rearward end thereof, a magnifying glass carried by said cylindrical member adjacent the forward end thereof and positioned athwart said axis to provide a magnified view along said line of sight, a tool-carrying arm carried by said cylindrical member at the forward end thereof and off-set from said axis, said tool-carrying arm being adapted to swing with said cylindrical member on said axis, said tool-carrying arm having a free end extending forwardly from said cylindrical member, and adjustable tool-mounting means carried by the free end of said tool-carrying arm, said tool-carrying arm holding said tool-mounting means at a spaced axial distance from the forward end of said cylindrical member to accommodate a grinding wheel being dressed by a said tool along said line of slight, said tool-mounting means being adapted to hold a wheel-dressing tool at variable positions relative to said axis, said tool-mounting means and tool-carrying arm being interconnected to permit adjustment of a said wheel-dressing tool to selected positions along lines disposed at right angles to each other in a plane normal to said axis an annular member secured to said cylindrical member adjacent one end thereof and which is adapted to rotate therewith, said annular member having an annular groove arranged around the periphery thereof, a pair of wedge blocks adjustably positioned in said groove, a finger-like stop member secured to said supporting member adjacent said annular member, said finger-like stop member having a portion which propects into said annular groove and which co-operates with the wedge blocks therein to limit the rotation of said sleeve member to a predetermined arc.

5. A dressing tool supporting device comprising a rotatable cylinder, said cylinder having an opening extending therethrough along its axis to provide a line of sight through the cylinder along said axis, an arm carried by said cylinder to rotate therewith having a forwardly extending portion offset from said axis, a cross-slide carried by the free end of said arm, said cross-slide being adapted to slide transversely of said arm, and a tool-supporting member carried by said cross-slide and disposed at right angles thereto, said tool supporting member being adapted to support a dressing tool in position for dressing a grinding wheel and along said line of sight, said cross-slide and tool-supporting member being spaced an axial distance from the forward end of said rotatable cylinder and a radial distance from said axis to accommodate a said grinding wheel within said line of sight between said rotatable cylinder and a tool held by the tool supporting member without obstruction of said line of sight between a said tool and the forward end of the rotatable member an annular member carried by said rotatable cylinder, said annular member having an anular groove arranged around the periphery thereof, a pair of wedge blocks adjustably positioned in said groove, a finger-like stop member secured to said supporting member adjacent said annular member, said finger-like stop member having a portion which projects into said annular groove and which co-operates with the wedge blocks therein to limit the rotation of said rotatable cylinder to a predetermined arc.

6. A device for holding a dressing tool during dressing of a grinding wheel comprising in combination a tool-carrying arm having its longitudinal axis arranged parallel to, and spaced from, a rotational axis about which said tool-carrying arm is reciprocably swingable, a slide member being interlocked with said arm and slidably movable transversely of the longitudinal axis of said arm, a post member carried by said slide member at right angles thereto, said post member being adapted to hold a dressing tool for said dressing operation, means for adjusting the position of said post member relative to said slide member for varying the distance of the dressing tool carried thereby from said longitudinal axis of said arm, a supporting member having an opening extending therethrough along said axis, and a tubular member extending through said opening in the supporting member and having its forward and rearward ends protruding from opposite ends thereof, said tubular member being open from end to end thereof along said axis to provide a line of sight therethrough, said tool-carrying arm having a radially extending portion embracing and carried by the said tubular member at the forward end thereof to hold the tool-carrying arm, the said tool-carrying arm spacing the said post member from said tubular member along said line of sight to accommodate a said grinding wheel being dressed forwardly of said tubular member an annular member carried by said tubular member, said annular member having an annular groove arranged around the periphery thereof, a pair of wedge blocks adjustably positioned in said groove, a finger-like stop member secured to said supporting member adjacent said annular member, said finger-like stop member having a portion which projects into said annular groove and which co-operates with the wedge blocks therein to limit the rotation of said tubular member to a predetermined arc.

7. A device for dressing a grinding wheel, comprising a support, a sleeve revolvably mounted to said support, said sleeve being open from end to end along its axis of rotation to provide a line of sight therethrough along said axis, magnifying means positioned in said sleeve to provide magnification of said sight, an arm carried by the forward end of said sleeve to revolve therewith, said arm having a radially extending portion secured to said sleeve and a longitudinally extending portion extending forwardly from said sleeve parallel to said axis, said longitudinally extending portion having at its forward free end a slide surface disposed transversely of the said longitudinally extending portion, a slide member in sliding engagement with said slide surface and movable laterally of

said longitudinally extending portion, adjustable stop means for providing limits to the sliding movement of said slide member, and a tool-holding post carried by said slide member at selectable extensions of the post relative to said slide member, said tool-holding post being adapted to hold a dressing tool adjacent the forward end of said arm along said axis and in said line of sight an annular member carried by said sleeve, said annular member having an annular groove arranged around the periphery thereof, a pair of wedge blocks adjustably positioned in said groove, a finger-like stop member secured to said supporting member adjacent said annular member, said finger-like stop member having a portion which projects into said annular groove and which co-operates with the wedge blocks therein to limit the rotation of said sleeve to a predetermined arc.

8. In a dressing device for dressing grinding wheels, a tool-carrying arm revolvable about an axis and carried by a support at its rearward end, said arm having a slideway provided on the forward face of its free end spaced from said support, a slide member in sliding engagement with said slideway and arranged to move in a line of travel transverse of said arm and in a plane at right angles to said axis, a tool-holding post secured to said slide member and disposed at right angles to said line of travel, and securing means for securing said post member at selected of variable extended positions relative to said slide member, said tool-holding means being adapted to hold a dressing tool adjacent the free end of said arm and directed annular groove and which co-operates with the wedge to said tool-carrying arm, said annular member having an annular groove arranged around the periphery thereof, a pair of wedge blocks adjustably positioned in said groove, a finger-like stop member secured to said supporting member adjacent said annular member, said finger-like stop member having a portion which projects into said annular groove and which co-operates wtih the wedge blocks therein to limit the rotation of said tool-carrying means to a predetermined arc.

9. In combination, a mount for a dressing tool, slide means for moving said mount in a plane, revolving means

for revolving said slide means and mount carried thereby about an axis of rotation, suport means for supporting said revolving means in position to revolve relative to said axis, said plane and said axis being disposed at right angles to each other, and magnifying means carried by said revolving means and positioned athwart said axis of rotation and providing a magnified view along said axis toward said mount, said mount being spaced along said axis from said magnifying means to provide space for positioning a grinding wheel being dressed within the view along said axis and intermediate of said magnifying means and said mount an annular member carried by said revolving means, said annular member having an annular groove arranged around the periphery thereof, a pair of wedge blocks adjustably positioned in said groove, a finger-like stop member secured to said supporting member adjacent said annular member, said finger-like stop member having a portion which projects into said annular groove and which co-operates with the wedge blocks therein to limit the rotation of said revolving means to a predetermined arc.

References Cited in the file of this patent

UNITED STATES PATENTS

1,929,967	Blood	Oct. 10, 1933
2,218,775	Turrettini	Oct. 22, 1940
2,234,539	Cooke	Mar. 11, 1941
2,378,401	Gardner	June 19, 1945
2,395,598	Weaver	Feb. 26, 1946
2,608,189	Statia	Aug. 20, 1952
2,642,856	Calloway	June 23, 1953
2,736,310	Baumann	Feb. 28, 1956

OTHER REFERENCES

"Industrial Diamond Review," volume 15, June 6, 1945, pages 132, 133.

Publication: "Industrial Diamond Review," May 1951, page 113.