

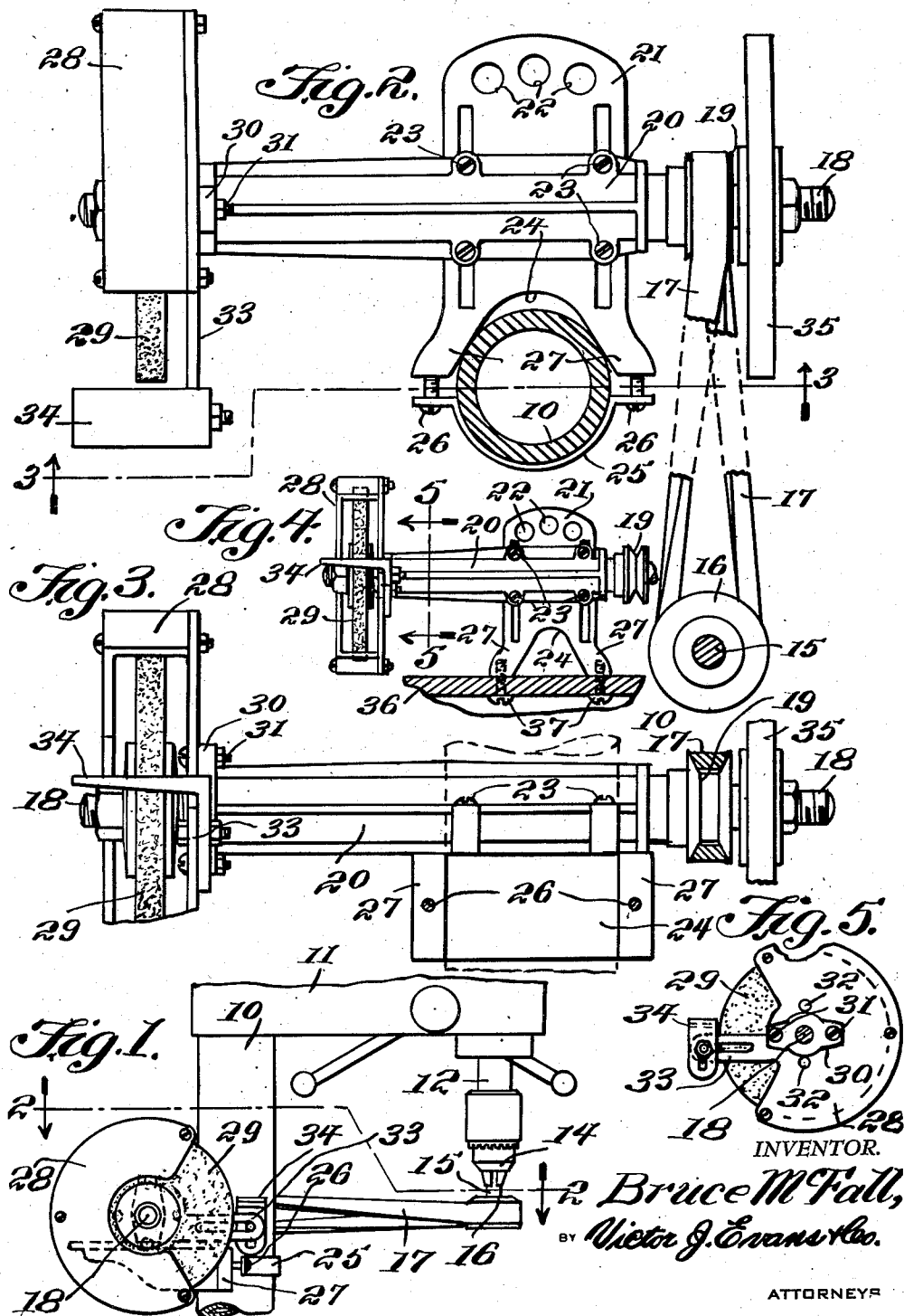
**March 11, 1958**

B. McFALL

**2,826,018**

## GRINDER ASSEMBLY

Filed July 5, 1955



1

2,826,018

## GRINDER ASSEMBLY

Bruce McFall, Johnson City, Tenn.

Application July 5, 1955, Serial No. 519,725

1 Claim. (Cl. 51—241)

This invention relates to a tool, and more particularly to a grinder assembly for mounting on a drill press column or the like.

The object of the invention is to provide a mounting means for a grinder assembly whereby the grinder wheel or buffer wheel can be attached to a drill press column and whereby power from the drill can be used for rotating the grinding and buffing wheels.

A further object of the invention is to provide a grinder assembly mounting which includes a bracket that can be detachably connected to a drill press column or to a work bench or other supporting structure, and whereby power for rotating the grinding and buffing wheels can be readily obtained from the drill press chuck.

A further object of the invention is to provide a grinder assembly mounting which is extremely simple and inexpensive to manufacture.

Other objects and advantages will be apparent during the course of the following description.

In the accompanying drawings, forming a part of this application, and in which like numerals are used to designate like parts throughout the same:

Figure 1 is an elevational view illustrating the grinder assembly mounting of the present invention, with parts broken away and in section.

Figure 2 is a sectional view taken on the line 2—2 of Figure 1.

Figure 3 is a sectional view taken on the line 3—3 of Figure 2.

Figure 4 is a view illustrating the bracket attached to a work bench or the like.

Figure 5 is a sectional view illustrating the attachment of the arbor to the grinder wheel housing, taken on line 5—5 of Figure 4.

Referring in detail to the drawings, the numeral 10 designates a vertically disposed column which forms part of a drill press assembly, and an arm 11 extends outwardly from the column 10 and may be secured thereto in any suitable manner. A drill press 12 is connected to the arm 11, and the drill press 12 may be of conventional construction. A chuck 14 is provided in the lower end of the drill press 12, Figure 1, and a drive shaft 15 depends from the chuck 14. A first pulley 16 is mounted on the lower end of the shaft 15, and an endless belt 17 is trained over the pulley 16.

There is further provided an arbor or support member 20 which has a driven shaft 18 rotatably mounted therein, and a second pulley 19 is mounted on the shaft 18, the belt 17 being also trained over the pulley 19.

There is further provided a bracket 21 which is arranged contiguous to the arbor 20, and the bracket 21 is provided with apertures or openings 22 which can be used for supporting tools, belts, or the like, Figure 2. Suitable securing elements such as bolts or screws 23 serve to detachably connect the arbor 20 to the bracket 21. The bracket 21 is further provided with a cutout or recess 24 which receives or engages a portion of the column 10. Arranged on the opposite side of the column 10 from the bracket 21 is a clamp 25 which is detachably connected to a body portion 27 of the bracket 21 by means of bolts or screws 26.

Connected to one end of the arbor 20 is a housing or guard 28 which has a grinding wheel 29 rotatably mounted therein, the wheel 29 being mounted on an end of the shaft 18. The housing 28 may be provided with

2

openings 32, Figure 5, whereby an ear or lug 30 which extends outwardly from an end of the arbor 20 may be connected to the housing 28 through the medium of bolts or screws 31. A guard member 33 extends from the housing 28 and has a tool rest 34 secured thereto. Mounted on the opposite end of the shaft 18 is a wheel 35 which may be a buffing wheel or the like.

Referring to Figure 4 of the drawings there is shown a modification wherein the bracket 21 may be secured to a work bench 36 by bolts or screws 37, so that instead of connecting the bracket 21 to the column 10, the bracket can be connected to the work bench 36 whereby power from the drill press 12 can be used for rotating the grinding wheels.

From the foregoing it is apparent that there has been provided a mounting for a grinder assembly whereby the grinder can be readily driven from a drill such as the drill 12. In use, the bracket 21 may be secured to the column 10 by means of the clamp 25. Then, with the parts arranged as shown in the drawings, when the drill 12 is energized or actuated, the shaft 15 will rotate and this will cause rotation of the pulley 16 which in turn actuates the belt 17. As the belt 17 moves, the pulley 19 will rotate and this in turn will rotate the shaft 18. As the shaft 18 rotates it will rotate the grinding wheel 29 and the buffing wheel 35. Thus, there is provided a means for mounting the grinding assembly contiguous to the drill 12 so that power for the grinding wheels is readily supplied from the shaft 15 which is mounted in the drill chuck 14. If desired, the device can be disconnected from the column 10 and the bracket 21 can be secured to a work bench 36 as shown in Figure 4 so that the grinder assembly can be mounted in different positions. Furthermore, the position of the parts can be adjusted as desired.

Furthermore the position of the arbor 20 can be adjusted or changed as desired, and the openings 22 can be used for supporting tools when desired. The grinder will fit all standard drill press columns. The member 34 provides a tool rest for use with the wheel 29.

I claim:

In combination, a drill press column, a power source supported by said column and including a chuck, a drive shaft extending from said chuck and having a first pulley thereon, a bracket provided with a recess for receiving a portion of said column, said bracket including a body portion, a clamp arranged on the opposite side of said column from said bracket and detachably connected to the body portion of said bracket, an arbor arranged contiguous to said bracket, securing elements detachably connecting said arbor to said bracket, a driven shaft extending through said arbor, a second pulley mounted on an end of said driven shaft, an endless belt trained over said first and second pulleys, a grinding wheel mounted on one end of said driven shaft, a housing surrounding a portion of said grinding wheel and provided with a plurality of apertures, a guard member extending from said housing and having a tool rest secured thereto, and an ear extending from said arbor and having securing elements extending therethrough and into engagement with the apertures in said housing.

### References Cited in the file of this patent

#### UNITED STATES PATENTS

262,074	Maltby	Aug. 1, 1882
862,724	Fields	Aug. 6, 1907
1,372,033	Marschke	Mar. 22, 1921
1,734,427	Gray	Nov. 5, 1929
1,821,569	Nelson	Sept. 1, 1931

#### FOREIGN PATENTS

564,672	Great Britain	Oct. 9, 1944
---------	---------------	--------------