R. M. WADE.

Mill Bush.

No. 3,601.

Patented May 25, 1844.

Fig: 3.

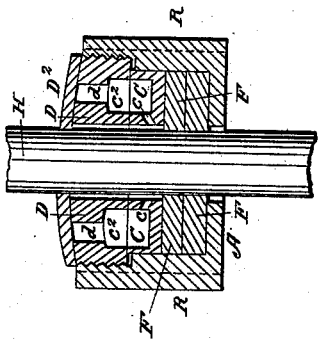


Fig: 2.

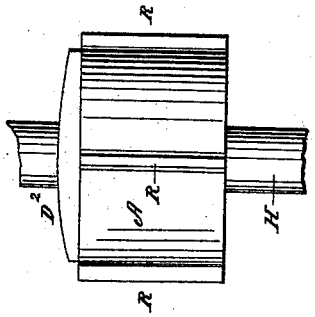
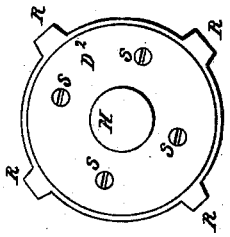


Fig: 1.



UNITED STATES PATENT OFFICE.

ROBERT M. WADE, OF JEFFERSON COUNTY, VIRGINIA.

MILL-BUSH.

Specification of Letters Patent No. 3,601, dated May 25, 1844.

To all whom it may concern:

Be it known that I, ROBERT M. WADE, of Jefferson county, Virginia, have invented a new and useful Mill-Bush, which is described as follows, reference being had to the annexed drawings of the same, making part of this specification, of which—

Figure 1 is a plan of the bush. Fig. 2 is a side elevation. Fig. 3 is a vertical section.

My invention and improvement consists in making a cup A for containing the packing F and oil chamber or circular trough C whose bottom is perforated with a round aperture somewhat larger in diameter than the mill spindle H which is to pass through said aperture and whose top D which is also perforated with a round aperture for the spindle H to turn in is a cylindrical piece of metal formed with a male screw on its circumference corresponding with a female screw made on the inside of the cup, into which it screws, and a circular groove C^2 on the under side to correspond with a similar circular groove C of the same diameter made in the upper side of the piston or driver E and which forms the chamber to contain the oil or fatty matter for lubricating the mill spindle. The cap or top (D) is also perforated with several apertures *d* communicating with the oil chamber C^2 C for supplying it with fatty matter when required, which apertures are kept closed with stoppers or otherwise as preferred and covered with a leather cap D^2 which is screwed down upon the aforesaid top by means of screws *s*. The said top also contains apertures for the insertion of a wrench of the ordinary construction for turning it.

The packing F consists of circular rings of leather put into the cup A around the spindle resting upon the bottom of the cup upon which packing the piston is placed. The diameter of the rings of leather is equal to the diameter of the interior of the cup. The diameter of the aperture in the center of the rings of leather is equal to the diameter of the spindle H. The diameter of the piston or driver E which also forms the lower part of the oil chamber, is equal to the diameter of the cup. The diameter of the circular aperture in the center of the same is a little greater than the diameter of the spindle which passes through the center thereof. The circular groove C made in the upper side of this piston, and which forms one half of the circular oil chamber, is of less diameter than the cup and of greater diameter than the spindle. The other or corresponding half of the oil chamber C′ is made in the under side of the top D of the cup.

When the top is screwed into the cup and hard down upon the piston an annular groove or oil chamber C C^2 is formed supplied through the aforesaid apertures *d* in the top and discharged through small apertures made in the inner rim or portion of the piston next the spindle through which the oil or fat in a liquid state flows gradually and slowly to the annular pieces or rings of leather or hide packing among which it percolates and finds its way to the spindle whose outer surface and the inner surface of the packing are thus kept properly oiled. As the packing F wears the top D is screwed hard down upon the piston E which crushes the rings F of packing and expands them causing their inner peripheries to touch the spindle H and when a fresh supply of rings of packing are to be put into the cup the top D^2 is to be unscrewed—removed and the piston raised. The periphery of the piston or driver E is made smooth to correspond with the smooth surface on the inside of the cup in which it is placed.

The outer surface of the cup is provided with ribs R which fit into corresponding grooves in the bed stone for securing the cup in the bed stone against turning. These ribs, however, may be omitted and wedges used or any suitable means for securing the cup in the bed stone.

In filling the oil chamber it is only necessary to raise the edge of the leather cap D^2, remove a plug or stopper from the aperture *d* in the top and pour in the oil.

The leather cap D^2 is designed principally for fitting closely around the spindle to prevent the entrance of any dust or dirt.

What I claim as my invention and which I desire to secure by Letters Patent is—

Constructing the mill bush with an annu-

lar chamber c c^2 for containing the oil or other lubricating substance used for oiling the mill spindle by making corresponding circular grooves in the bottom of the screw cap D and in the top of the piston E which thus answer the two fold purpose of oil chamber and driver for keeping the annular rings of leather packing F contained in the cylindrical cup A lubricated and against the spindle in the manner and for the purpose set forth.

ROBT. M. WADE.

Witnesses:
WM. P. ELLIOT,
DAVID WADE.