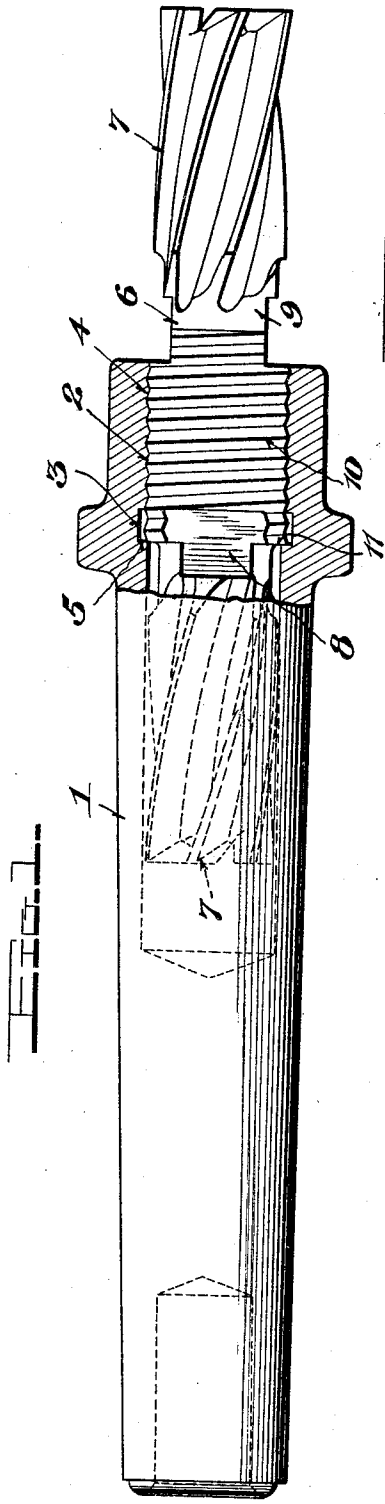
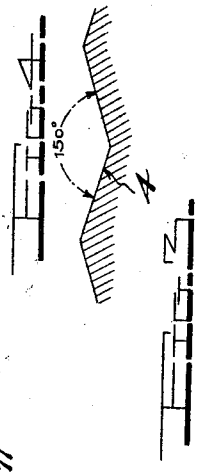
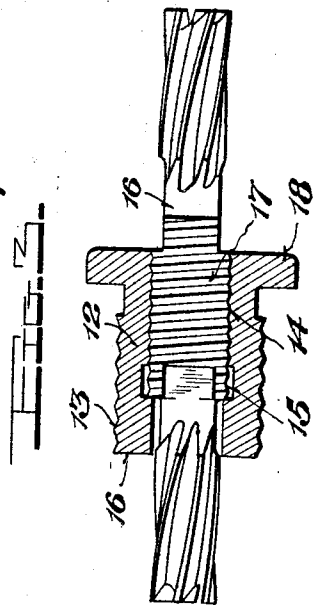
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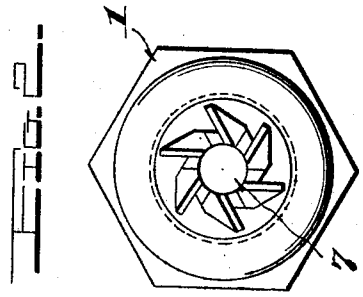
MILL CHUCK

Filed May 26, 1932









Inventor

Joseph M. Redinger

By Joseph A. Miller

Attorney

Patented Nov. 29, 1932 1,889,571

UNITED STATES PATENT OFFICE

JOSEPH M. REDINGER, OF JOHNSTON, RHODE ISLAND

MILL CHUCK

Application filed May 26, 1932. Serial No. 613,634.

This invention relates to mill chucks and the primary object thereof is to provide a chuck of improved construction for firmly and rigidly locking the mill to the chuck and at the same time to obtain accurate alignment of the parts.

A further object of the invention is to facilitate screwing of the mill into position without danger of stripping or otherwise injuring the threads.

Still further the invention aims to provide a device of this type which embodies an adaptor which can be readily inserted into the chuck to adapt same for use with mills of varying diameters.

In the drawing:

Figure 1 is a side elevation of the invention partly broken away and in section;

Figure 2 is a front end elevation;

Figure 3 is a longitudinal section of the adaptor showing a mill therein; and

Figure 4 is a detail view in section of the thread.

In proceeding in accordance with the present invention a chuck 1 is employed which is formed to be received in the head stock of an engine lathe or other machine and which is provided with a bore 2 that is enlarged as indicated at 3. The forward end of the bore is provided with threads 4 which latter it will be noted in Figure 4 are of approximately 150 degrees, the enlargement 3 being located beyond the inner terminals of the threads 4, the enlargement forming an abutment 5. The mill 6 may have one or two cutters 7 thereon and in the latter instance is provided with two wrench engaging portions 8 and 9. Obviously, however, but one cutter may be employed on the shank if desired. The threads 10 on the mill are also of 150 degrees corresponding to those of the chuck. From the foregoing it will be seen that the mill may be readily screwed into position until the abutment 11 formed at the inner terminal of its threads engages the abutment 5 of the chuck, following which a wrench may be applied at 9 to firmly lock the parts.

As shown in Figure 3, an adaptor 12 may be employed which has external threads 13 of the same character as those of the threads 2 of the chuck. The adaptor has threads 14 in its bore which terminate at the enlargement 15 of the bore, while the mill 16 has threads 17 engaging with the threads 14, the threads 14 and 17 also being each of approximately 150 degrees. In use of the adapter same is screwed into the bore of the chuck 1 until its end 16 engages the abutment 5 following which a wrench is applied to the head 18 as above described. After the adaptor is secured in position the mill is then screwed into the chuck as described in connection with the construction of Figure 1.

By the use of threads of approximately 150 degrees a flatter contact is had between the parts, affording a firm and more rigid support for the mill and at the same time enables same to be readily screwed into position without danger of stripping or mashing the threads. At the same time the parts are more accurately aligned because the thread joint is brought closer to a straight line joint as is believed to be obvious.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is:

An adaptor for attaching vari-sized double ended tools to a shank having a threaded recess therein and a bore rearwardly of the recess, the recess being of uniform diameter throughout and having threads of 150°, which adaptor comprises a body having a through bore formed with an internally threaded portion of uniform diameter and having its periphery formed with a portion of uniform diameter with external threads, said adaptor body also having a reduced bore portion providing an abutment shoulder for a portion of the tool, said internal and external threads of the adaptor being each of 150°.

In testimony whereof I have signed my name to this specification.

JOSEPH M. REDINGER.