W. L. MILLER.

REAMER HEAD.

APPLICATION FILED JULY 16, 1919.

1,399,142. **Patented Dec. 6, 1921.**

Fig. 1.

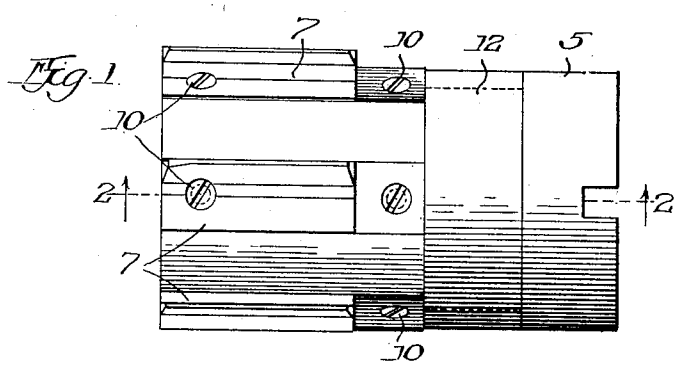


Fig. 2

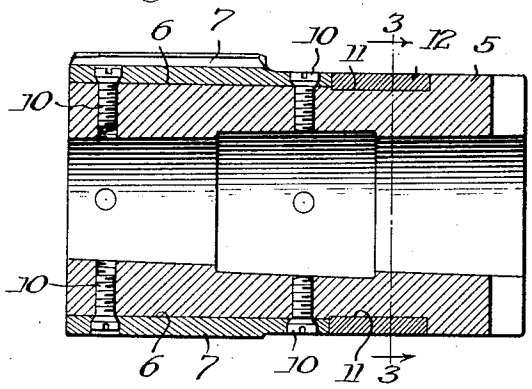


Fig. 3

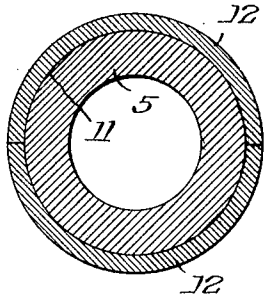


Fig. 4

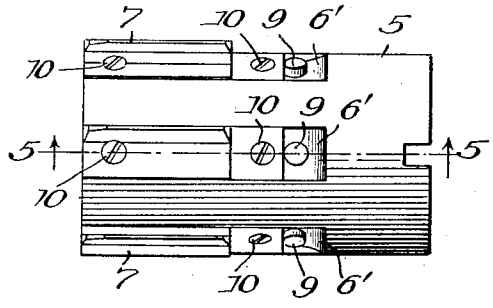
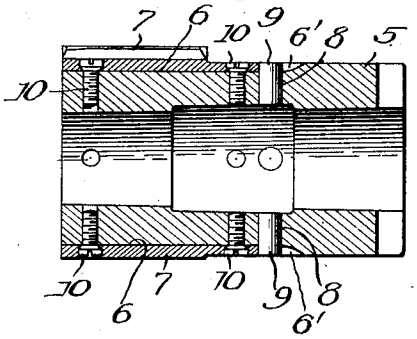


Fig. 5.



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REAMER-HEAD.

1,399,142. Specification of Letters Patent. Patented Dec. 6, 1921.

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To all whom it may concern:

Be it known that I, WILLIAM L. MILLER, a citizen of the United States, residing at Madison, in the county of Dane and State of Wisconsin, have invented certain new and useful Improvements in Reamer-Heads, of which the following is a specification.

This invention relates to improvements in reamer heads, and the principal object of the invention is to provide an improvement in a well known type of reamer head more particularly in the direction of providing an improved abutment for receiving the end thrust on the reamer blades, at the same time avoiding the presence of certain idle spaces in the head which serve to catch dirt and oil.

My invention, its structural features, and the advantages residing therein will be readily understood and appreciated by those skilled in the art from the following description, taken in connection with the accompanying drawing, in which—

Figure 1 is a plan view of my improved reamer head;

Fig. 2 is a longitudinal section on the line 2—2 of Fig. 1;

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

Fig. 4 is a plan view illustrating the known construction on which my present invention is an improvement; and

Fig. 5 is a longitudinal section on the line 5—5 of Fig. 4.

Referring first to Figs. 4 and 5, which illustrate a construction of reamer head at present extensively in use, a brief description thereof will render the purposes and advantages of my improvement clear. In this known construction, the body 5 of the reamer head is longitudinally channeled as indicated at 6 for some distance inwardly from one end, and these channels are extended for a somewhat greater distance than the length of the reamer blades 7. At the inner ends of the channels 6 radial holes 8 are drilled to receive pins 9 which form abutments for the inner ends of the blades 7 to avoid shearing strains on the fastening screws 10 which secure the reamer blades to the body. This construction not only necessitates the drilling of the holes 8 and the provision of the abutment pins 9, but it also leaves at the inner ends of the blades countersunk spaces 6′ which serve to catch dirt and oil.

In carrying out my invention, shown in Figs. 1, 2, and 3, I provide a solid or one piece body 5 having the same longitudinal channels 6 accommodating the reamer blades 7; and extending transversely of and intersecting the inner ends of said longitudinal channels I provide an annular transverse channel 11, which is filled by a ring consisting as herein shown, of two semi-circular sections 12, the meeting ends of which are welded together. This ring snugly fits and completely fills the channel 11, and the forward side of the ring abuts squarely against the inner squared ends of the reamer blades, as clearly shown in Fig. 1. The outer surface of the ring 12 is preferably flush with the circumference of the reamer body, so that, with its ends welded together, the ring becomes for all practical purposes, a solid part of the reamer body, obviating the necessity of drilling holes to take the abutment pins, forming a stronger and more solid abutment to receive the end thrust on the blades, eliminating the recesses 6′ of the old construction, which were catchalls for dirt and oil, and also providing a neater and more solid appearing tool.

I claim:

1. A reamer head, comprising a one-piece body member formed with longitudinal channels and with an annular channel extending transversely of and intersecting the inner ends of said longitudinal channels, a ring completely filling said annular channel, and cutter blades in said longitudinal channels having square inner ends abutting against one side of said ring.

2. A reamer head, comprising one-piece body member formed with longitudinal channels and with an annular channel extending transversely of and intersecting the inner ends of said longitudinal channels, a continuous ring snugly fitting and completely filling said annular channel with its outer surface flush with the outer surface of said body member, and cutter blades secured in said longitudinal channels with their inner ends abutting against one side of said ring.

WILLIAM L. MILLER.