April 28, 1931. A. J. McCLOSKEY 1,803,267

REAMER FOR DRILL BITS

Filed July 26, 1929 2 Sheets-Sheet 2

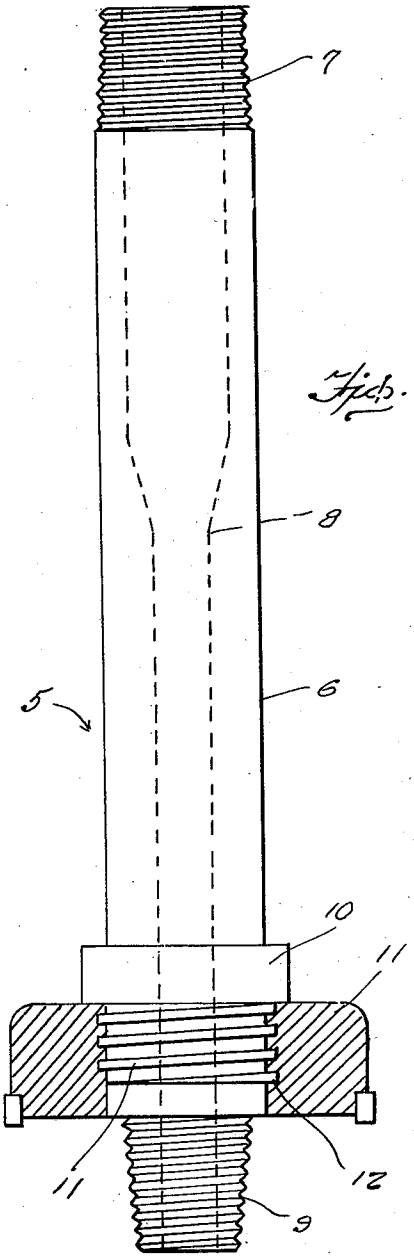


Fig. 2.

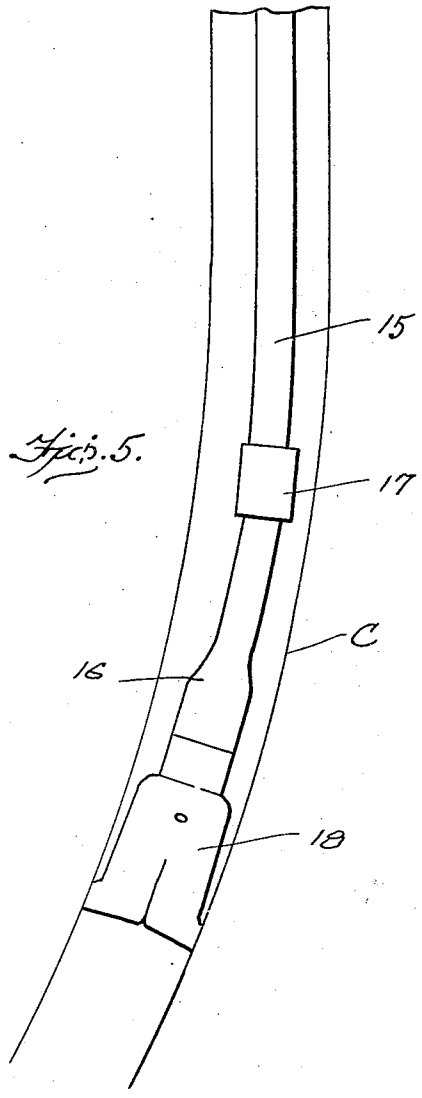


Fig. 5.

Inventor

Arthur J. McCloskey

By Clarence A. O'Brien

Attorney

Patented Apr. 28, 1931 1,803,267

UNITED STATES PATENT OFFICE

ARTHUR J. McCLOSKEY, OF MARACAIBO, VENEZUELA

REAMER FOR DRILL BITS

Application filed July 26, 1929. Serial No. 381,257.

This invention relates to drilling bits for well drilling, and more particularly, rotary drilling bits for use in drilling and developing deep oil wells, the primary object of the invention being to provide a reamer or follower for the drill bit, the purpose of the reamer being to maintain in gauge at all times the hole being drilled.

Another very important object of this invention is to provide a reamer adapted to be associated with the drilling apparatus so as to constiute a follower for the drill bit which is very simple in construction, strong, durable, and which will not only aid in maintaining a straight hole, but which will also save wear and tear on the bit, save considerable time in going in and coming out of the hole, the construction of the reamer being such as to render the same inexpensive to install and use, and otherwise well adapted for the purpose designed.

Other objects and advantages of this invention will become apparent during a study of the following description, taken in connection with the accompanying drawings, wherein:

Figure 1 is an elevational view of a rotary well drilling bit showing the same within the hole fully illustrating the application of my invention therewith.

Figure 2 is a view partly in section and partly in elevation of my improved reamer.

Figure 3 is a plan view of the collar or follower body which constitutes the cutting element of my reamer.

Figure 4 is a fragmentary elevation of one end of the tubular connector forming a part of this invention.

Figure 5 is an elevational view of a drill bit of ordinary construction with my invention being applied thereto, illustrative of a bit and a hole formed by the bit which has become crooked, fully illustrating the comparison between a hole drilled with a bit having my invention applied thereto and a bit minus a reamer.

With reference more in detail to the drawings, wherein like numerals indicate similar parts throughout the several views, it will be seen that I have designated my improved reamer generally by the reference character 5.

Before proceeding with a detailed description of the construction of my device, there is the fact that the prime requisite in oil well drilling is to put down a well with least expense and time. When in drilling a well the hole becomes crooked, the drill pipe is caused to bend and follow the lead of the hole, and in many cases breaks off, causing what is known as a "fishing operation."

As is well known, when a drill collar, bit, or other material breaks and lodges in the hole, it is necessary to draw the apparatus out of the hole, and to employ special tools commonly known as fishing tools to fish out or extract such features as may have been broken off. If they are unable to extract these broken pieces, then in many cases it is necessary to junk the hole, or to start upon a new one. Such operations must of course entail a great deal of time as well as being expensive. It is to overcome the danger which makes such operations necessary that I have devised and especially constructed this reamer to be incorporated within the drilling apparatus so as to follow the drill bit, the operation of which will be manifest as the description proceeds.

Attention is first invited to Figure 5, wherein is illustrated a drill hole C which hole has become curved or crooked as shown, thus causing the drilling apparatus to assume the curved or crooked position as illustrated. The usual apparatus consisting of the drill pipe 15, the drill collar 16, 17 designating the sleeve connection between the collar and the pipe and 18 the ordinary fishtail drill bit, the shank portion of which is connected to the opposite end of the drill collar 16 as shown. As before intimated, this structure is conventional and forms no salient feature of this invention.

As illustrated in this figure, the collar 16 has become bent due to the crooked hole being drilled, and as will be readily appreciated, continual operation of the drill apparatus could but only terminate in the collar being broken or else becoming permanently bent, thus rendering the device useless.

April 28, 1931. F. MEYER ET AL 1,803,268

MOUTHPIECE FOR WOOD WIND INSTRUMENT

Filed March 13, 1930

Fig. 1.

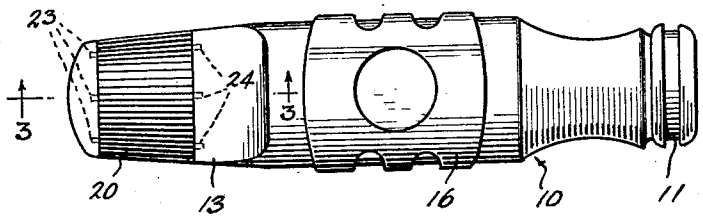


Fig. 2.

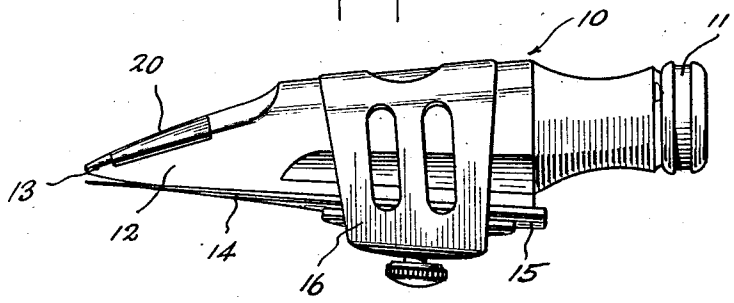


Fig. 4.

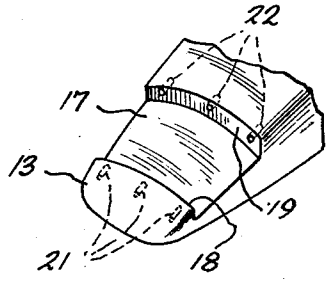
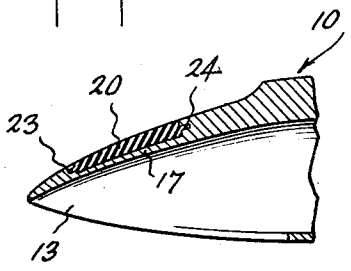


Fig. 3.



OTTO LINK
FRANK MEYER
INVENTORS

BY Victor J. Evans
ATTORNEY

WITNESS:
A. J. Mank