

F. H. CLORE.
WELL DRILLING TOOL.
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1,373,996.

Patented Apr. 5, 1921.

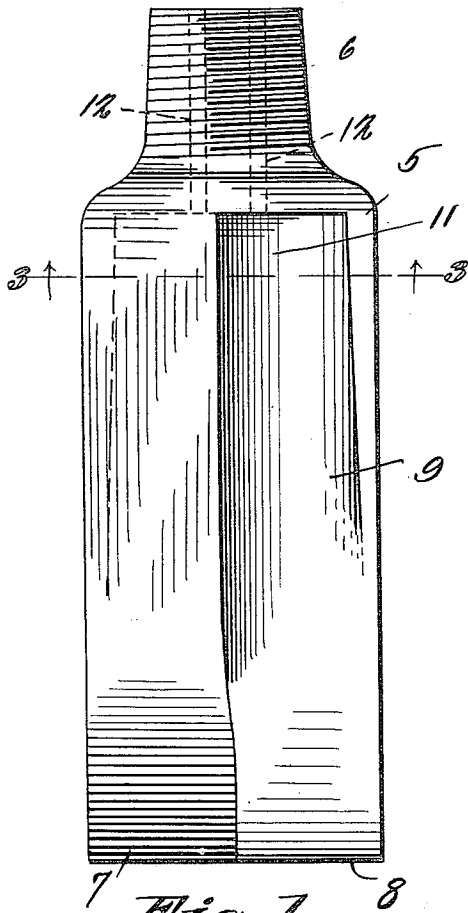


Fig. 1.

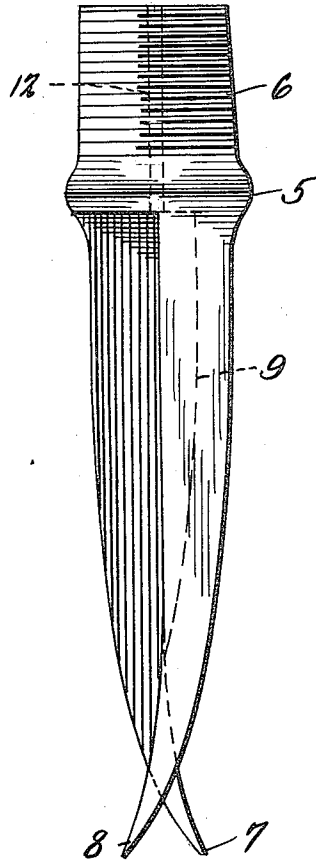


Fig. 2.

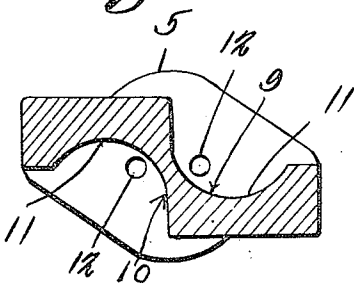


Fig. 3.

Inventor,
Franklin H. Clore.
By *Thurman*
Attorney.

UNITED STATES PATENT OFFICE.

FRANKLIN H. CLORE, OF LIVINGSTON, TEXAS.

WELL-DRILLING TOOL.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, FRANKLIN H. CLORE, a citizen of the United States of America, and resident of Livingston, in the county of Polk and State of Texas, have invented certain new and useful Improvements in Well-Drilling Tools, of which the following is a specification.

This invention relates to well drilling tools and particularly to a bit adapted for use as a rotary tool, the said device having means for attachment to a rotary member and for supplying fluid to the cutting edges of the bit for preventing the accumulation of mud thereon.

An object of this invention is to provide novel means which will supply fluid to the cutting sides of the bit and whereby the full force of water will reach the cutting side only; so as to insure the dislodgment of mud and the proper cleaning of the bit so that the mud will not interfere with the cutting action of the tool.

A further object of this invention is to provide a tool, the cutting sides of which are slightly curved and wherein ports are provided for the flow of fluid so that the fluid will impinge the accumulations which may be present on the cutting surfaces of the bit.

With the foregoing and other objects in view, the invention consists in the details of construction, and in the arrangement and combination of parts to be hereinafter more fully set forth and claimed.

In describing the invention in detail, reference will be had to the accompanying drawings forming part of this specification wherein like characters denote corresponding parts in the several views, and in which—

Figure 1 illustrates a view in elevation of a bit embodying the invention;

Fig. 2 illustrates an edge view thereof; and

Fig. 3 illustrates a section on the line 3—3 of Fig. 1.

In these drawings 5 denotes the head of the bit having an upwardly extended threaded shank 6, and blades or cutting edges 7 and 8 which are oppositely extended.

From the shank to the point of diver-

gence of the cutting edges, the bit has concavities 9 and 10, one on one side and one on the other side of the bit and offset with relation to the transverse center of the bit. The surface of each cutting side of the bit is curved as shown at 11 and a port 12 extends through the shank 6 on each side of the transverse center and discharges at the top of the curved portion of the bit so that fluids forced through the port will impinge any mud or accumulation on the bit and dislodge it. The ports are restricted in area for the reason that it is the desire of the inventor that the fluid passing therethrough will be in the nature of a spray or fine stream having considerable force, and the location of these ducts or orifices is of importance since they are so placed as to cause the water to utilize the front surfaces of the tool, or bit, as a resistance while the fluid is operating on the deposit to displace it.

I have shown this device without great regard to proportions as to length, thickness or breadth, it being understood that the device will be made proportionate to the size of the hole to be bored and the material to be worked, and it is believed that one skilled in the art will acquire a comprehensive disclosure which will enable him to carry the invention into practice.

I claim—

1. In a well bit, a body having a threaded shank with ports extending longitudinally therein on opposite sides of the longitudinal axis of the said shank, the said body having concavities in each face oppositely disposed on opposite sides of the longitudinal axis, the surfaces of the concavities being curved and the cutting edges of the bit being curved, the said cutting edges extending oppositely.

2. In a well bit, a body portion having a shank with apertures therein extending longitudinally, one on each side of the longitudinal axis of the shank, the said body having recesses the walls of which are concaved, the said apertures communicating with the recessed portions of the bit at the inner edges of the recesses, the said bit having oppositely extending cutting edges.

FRANKLIN H. CLORE.