(No Model.)

S. F. KARNES & P. NICHOLS.

TOOL FOR STRAIGHTENING ARTESIAN WELLS.

No. 451,274. Patented Apr. 28, 1891.

Fig. 1.

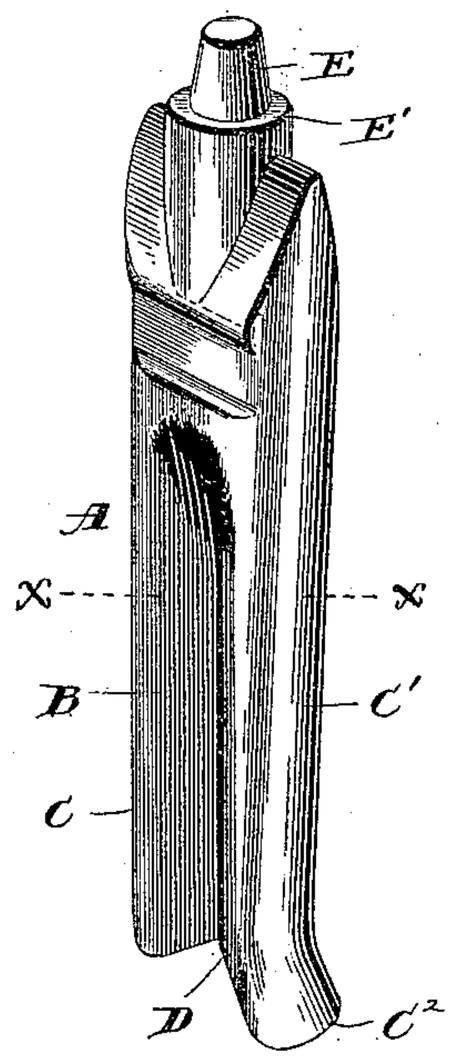


Fig. 2.

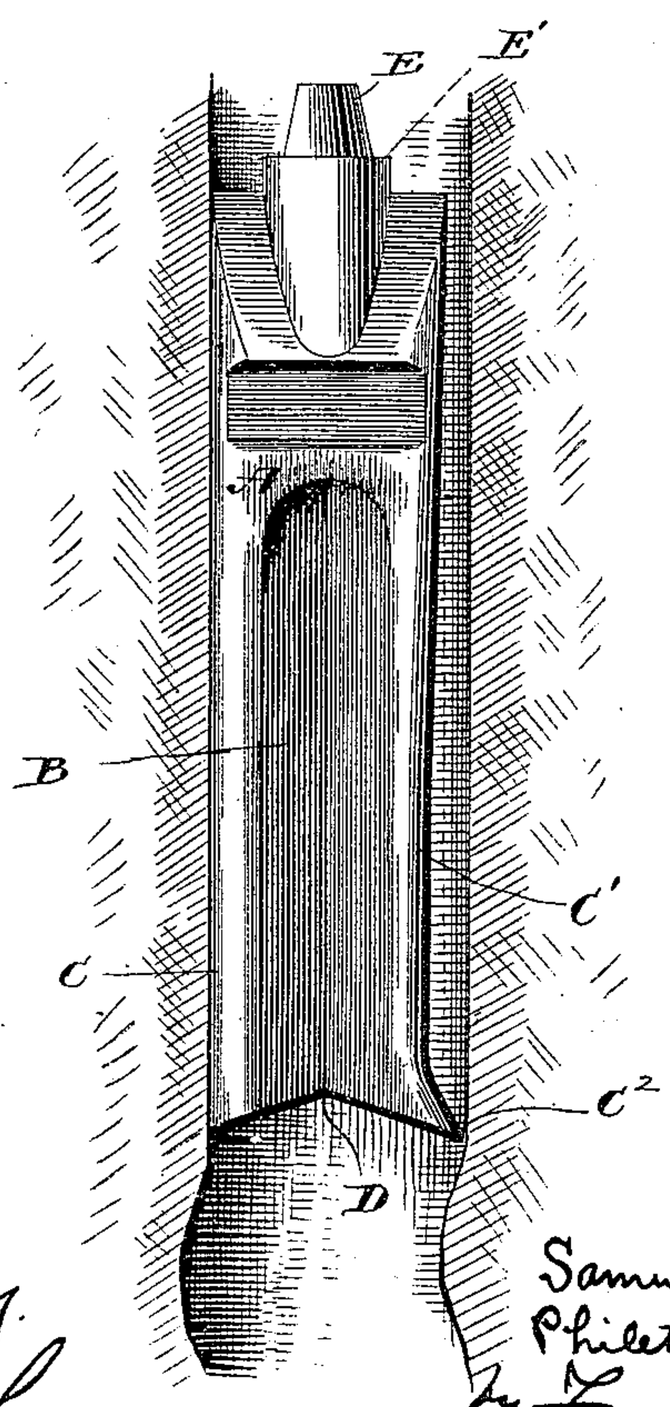
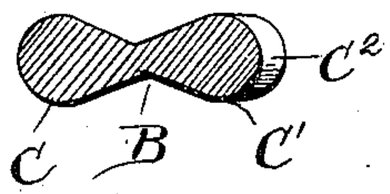


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

SAMUEL F. KARNES AND PHILETUS NICHOLS, OF HARVEY'S, PENNSYLVANIA.

TOOL FOR STRAIGHTENING ARTESIAN WELLS.

SPECIFICATION forming part of Letters Patent No. 451,274, dated April 28, 1891.

Application filed February 10, 1891. Serial No. 380,961. (No model.)

To all whom it may concern:

Be it known that we, SAMUEL F. KARNES and PHILETUS NICHOLS, citizens of the United States, residing at Harvey's, in the county of Greene and State of Pennsylvania, have invented certain new and useful Improvements in Tools for Straightening Artesian Wells; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to certain new and useful improvements in tools for use in boring Artesian wells; and it relates more particularly to that class of tools which are employed in straightening well-holes that have been bored and in removing irregular projections which may from any cause protrude or encroach upon the well after it has been bored.

To these ends and to such others as the invention may pertain the same consists in the peculiar construction of the tool, which will be more fully hereinafter described, shown in the accompanying drawings, and then specifically defined in the appended claim.

The invention is clearly illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of a tool constructed in accordance with our invention. Fig. 2 is a sectional view through a well, showing the tool in actual use. Fig. 3 is a transverse section upon the line $x\,x$ of Fig. 1.

Reference now being had to the details of the drawings by letter, A represents the tool, which consists of a solid casting of block of metal, having two of its faces flattened, and said flat faces provided with longitudinal grooves B, as shown. The outer edges C C′ are rounded, and at its lower end a notch D is provided. The edge C of the tool, it will be observed, is upon a true or straight line, while the opposite edge C′ is slightly curved throughout its entire length, and the cutting-edge C^2, which is formed upon the extreme lower end of the curved edge C′, thus projects beyond the side of the tool.

At its upper end the tool is provided with the pin E, which serves as a means whereby the tool may be attached to the drill-rod, as is common in this class of tools, and below this pin a supplemental collar E′ is provided, which forms a hold for the grappling-tools in case the pin should be accidentally broken when in use.

We have found from experience in the use of tools of this character which have been provided with cutting-edges upon both sides that the work done has been unsatisfactory, owing to the tendency of the tool to bind in the hole, thus frequently resulting in the plugging of the well.

It will be observed upon reference to Fig. 2 of the drawings that the straight edge C of the tool will follow closely against one of the vertical side walls of the well, thus at all times serving as a guide and holding the cutting-edge of the tool in proper position to insure its doing its work properly.

Having thus described our invention, what we claim to be new, and desire to secure by Letters Patent, is—

The herein-described tool for straightening Artesian wells, the same consisting of a block of metal having two of its faces flattened and provided with longitudinal central grooves, as described, one of its outer edges straight and its opposite outer edge formed upon a curve, with the cutting-edge at the lower end of the said curved edge, and the pin E and supplemental collar E′ provided at the upper end of the tool, substantially as and for the purpose described.

In testimony whereof we affix our signatures in presence of two witnesses.

SAMUEL F. KARNES.
PHILETUS NICHOLS.

Witnesses:
PETER BARNEY,
W. L. SMITH.