

F. M. EDGAR & T. E. McKEE.

CASING SHOE.

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1,058,567.

Patented Apr. 8, 1913.

Fig. 1.

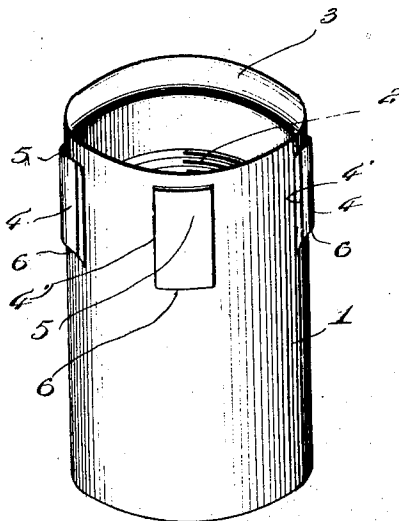


Fig. 2.

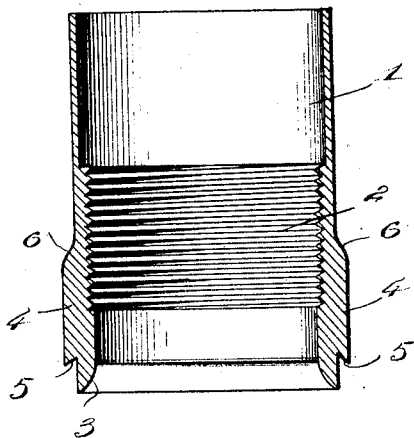
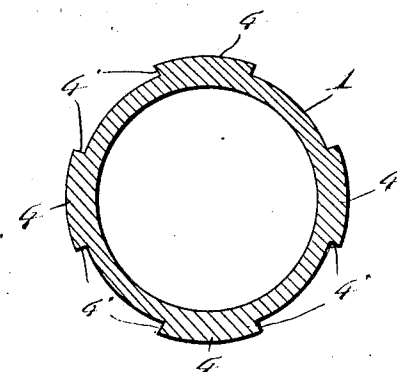


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

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CASING-SHOE.

1,058,567.

Specification of Letters Patent.

Patented Apr. 8, 1913.

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To all whom it may concern:

Be it known that we, FRANCIS M. EDGAR and THOMAS E. McKEE, citizens of the United States, residing at Santa Paula, in the county of Ventura and State of California, have invented new and useful Improvements in Casing-Shoes, of which the following is a specification.

This invention relates to casing shoes used in drilling oil wells, the same being fitted to the first joint of the casing put into the well.

In the ordinary makes of casing shoes now in common use, the teeth which are provided on the bottom edge of the shoe are liable to become broken, and result in the breakage of other parts of the machinery, thus causing serious delay and expense. Furthermore, the lugs or cutters used on under reamers, for example, soon become clogged with mud, during the reaming operation, making it extremely hard to draw the reamer back into the casing again.

The object of this invention is to provide a casing shoe which will overcome all of the objections now well understood by operators in drilling oil wells, and to provide a casing shoe in which the cutters are arranged so as to avoid any probability of the same becoming broken, while keeping the same in good cutting condition at all times.

With the above and other objects in view, the invention consists in the construction, combination and arrangement of parts, as will be hereinafter more fully described, illustrated in the accompanying drawings, and pointed out in the claim hereunto appended.

In the drawings: Figure 1 is a perspective view of a casing shoe embodying the present invention. Fig. 2 is a diametrical section through the same. Fig. 3 is a cross section through the casing shoe in line with the teeth.

The casing shoe contemplated in this invention comprises essentially a cylindrical body 1, internally threaded, as shown at 2, for attachment to the casing, and internally beveled or rounded at its lower end, as shown at 3.

On the outer face of the body, there is arranged a circular series of cutting teeth 4, the opposite side edges of which are parallel to each other, and undercut, as shown at 4', while the advance edge 5 thereof is likewise undercut, the rear or back edge thereof being beveled off, as shown at 6, so as to merge gradually into the outer face or periphery of the shoe, as clearly shown, thereby admitting of the easy reciprocation of the shoe. It will be observed that the spaces between the teeth are about equal to the width of the teeth themselves, so as to give the proper clearance, and enable the shoe to be operated with ease.

In operation, the shoe is raised and lowered, and at the same time while it is in an elevated position, it is turned, so as to shift the teeth to a different cutting position. On account of the disposition, shape and arrangement of the teeth, the pipe or casing is allowed to follow freely.

What is claimed is:

A casing shoe, involving a hollow cylindrical body having the bottom edge thereof beveled internally and provided exteriorly with projecting cutting teeth having undercut side and front edges and beveled off at the top flush with the outside face of the body.

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

FRANCIS M. EDGAR.
THOMAS E. McKEE.

Witnesses:

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