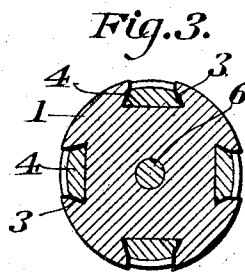
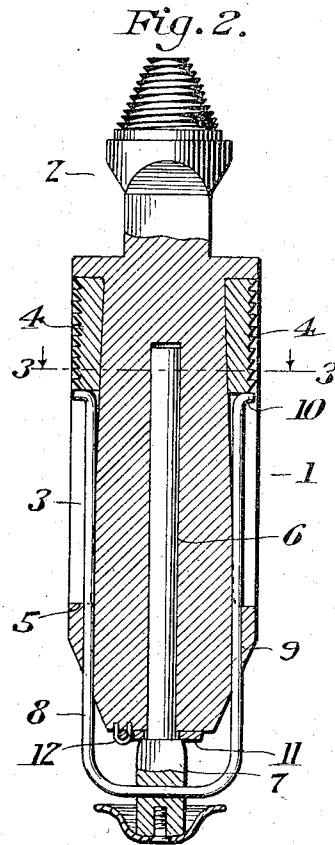
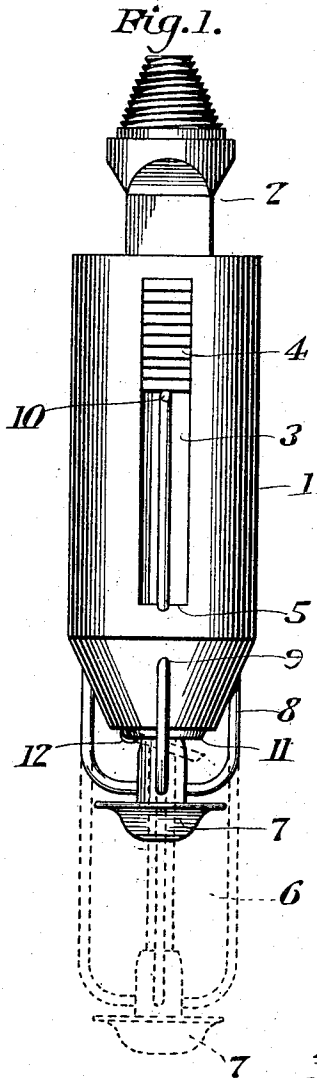


J. H. MAXWELL.  
DETACHABLE OIL WELL CASING PULLER.  
APPLICATION FILED SEPT. 25, 1915.

1,209,006.

Patented Dec. 19, 1916.



Witnesses

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# UNITED STATES PATENT OFFICE.

JESSEE H. MAXWELL, OF BARBOURSVILLE, WEST VIRGINIA.

DETACHABLE OIL-WELL-CASING PULLER.

1,209,006.

Specification of Letters Patent.

Patented Dec. 19, 1916.

Application filed September 25, 1915. Serial No. 52,718.

*To all whom it may concern:*

Be it known that I, JESSEE H. MAXWELL, a citizen of the United States, residing at Barboursville, in the county of Cabell and State of West Virginia, have invented new and useful Improvements in Detachable Oil-Well-Casing Pullers, of which the following is a specification.

This invention relates to oil well tools and more particularly to well casing pullers.

One of the principal objects of the invention is to provide simple and efficient means which can be lowered into the casing and upon lifting of the drilling tool will automatically grip the casing and firmly hold the same, the gripping means being so constructed that the greater the strain upon the drilling tool, the greater the gripping of the puller upon the wall of the casing.

A further object of the invention is to provide a device of this character having a plurality of slidably mounted gripping dogs which may be held in inoperative position and which may be forced to inoperative position so as to release the puller from the casing.

Further objects of this invention will appear as the following specific description is read in connection with the accompanying drawings which form a part of this application, and in which:—

Figure 1 is a side elevation showing in dotted lines the position of the parts when the dogs are in active or operative position and in full lines when the dogs are in inoperative position. Fig. 2 is a vertical sectional view. Fig. 3 is a horizontal sectional view taken on the line 3—3 of Fig. 1.

Referring more particularly to the drawing, 1 represents the body of the puller which is preferably made circular in cross-section and which is provided at its upper end with a longitudinal extension 2 threaded upon its outer end to receive the drilling tool. Arranged at quartering intervals around the body are longitudinal grooves 3 having undercut side walls to receive the dovetail dogs 4 suitably roughened upon their outer surfaces. These grooves gradually decrease in depth from their upper ends to the limiting shoulders 5 on their lower ends and the dogs are of such thickness as to be arranged below the periphery or outer surface of the body when in the uppermost position, as will be hereinafter described, and to be extended beyond the pe-

riphery or outer surface of the body 1 when in their lowermost position.

In order to hold the dogs in raised or inoperative position, there is slidably mounted in the body, longitudinally thereof, a rod 6 having a head 7 to which are connected a plurality of guiding and supporting fingers 8 extending parallel with the rod 6 and operating in longitudinal openings 9 formed in the body. Their free terminals are preferably bent into the form of supporting feet 10 which are adapted to bear against the lower ends of the dogs 4. This plunger is held in raised position by means of a washer or collar 11 which surrounds the rod 6 and is hingedly connected, as shown at 12, to the lower end of the body. The aperture in the collar is somewhat larger than the diameter of the plunger so that the same will cant upon the plunger and hold the same against downward movement until the washer has its free side held flat against the end of the body at right angles to the normal.

When the device is applied, the rotatable end supporting bars are lowered to their fullest extent and the body dropped into the casing, the body nearly fitting the interior of the same. The dogs will, therefore, be raised upon the shoulders 5 by contact with the inner wall of the casing. Upon any attempt to raise the body, the roughened or notched surfaces of the dogs will bite into the casing walls which will cause a lifting or withdrawal of the casing from the wall. When the casing is fully withdrawn or when it is desired to remove the puller from the casing, all that is necessary is to force the dogs 4 to their uppermost position by elevation of the rod 6. This may be done by lowering the drilling tool and engaging the head 7 with the ground after the section of casing removed has been disconnected from the other sections within the well.

What is claimed is:—

In a well casing puller, a circular body having a plurality of longitudinally extending dovetail grooves gradually decreasing in length from their upper to their lower ends, dovetail dogs slidably mounted in the grooves and arranged to be exposed beyond the surface of the body when in their lowermost position, a rod slidably mounted in the body and arranged to depend therefrom in axial alinement therewith, a hinged collar

surrounding the rod and adapted to cant thereon to engage and hold the rod, and rods connected to the lower end of the first-mentioned rod and slidably mounted in the  
5 body, said last mentioned rods adapted to engage the dogs and raise them to elevated position when the first rod is raised.

In testimony whereof I affix my signature in presence of two witnesses.

JESSEE H. MAXWELL.

Witnesses:

P. P. WILSON,

W. S. McCUTCHIN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."