

Nov. 18, 1924.

L. D. TODD

1,516,416

BAILER TOP

Filed July 27, 1922

2 Sheets-Sheet 1

Fig. 1.

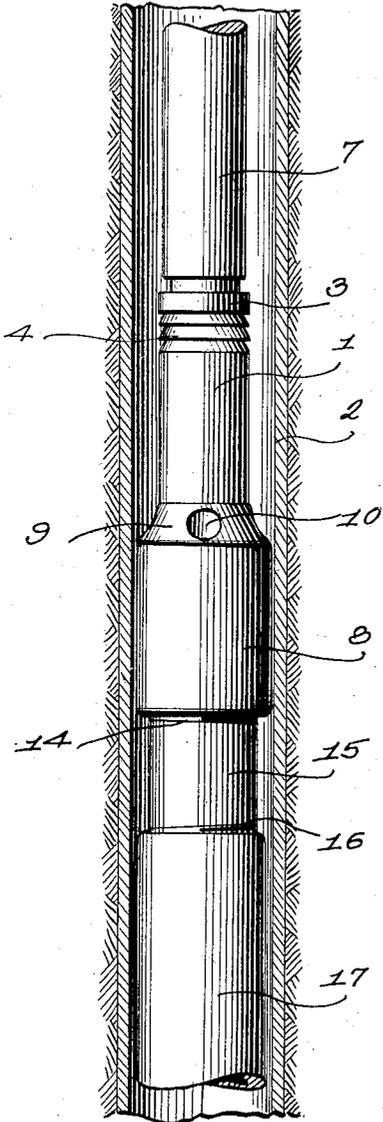


Fig. 5.

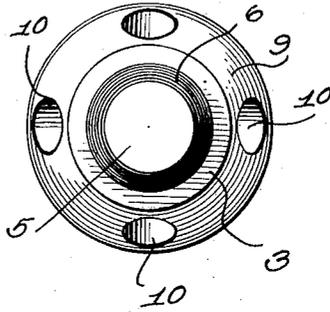
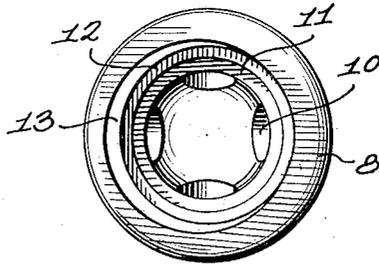


Fig. 6.



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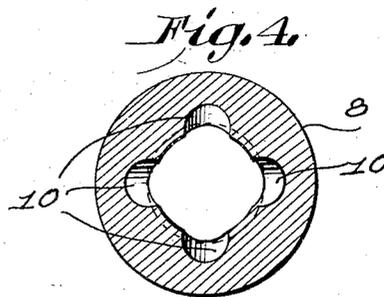
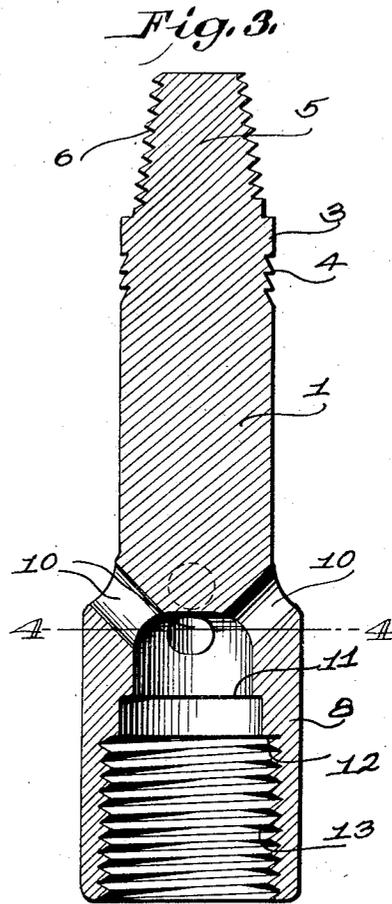
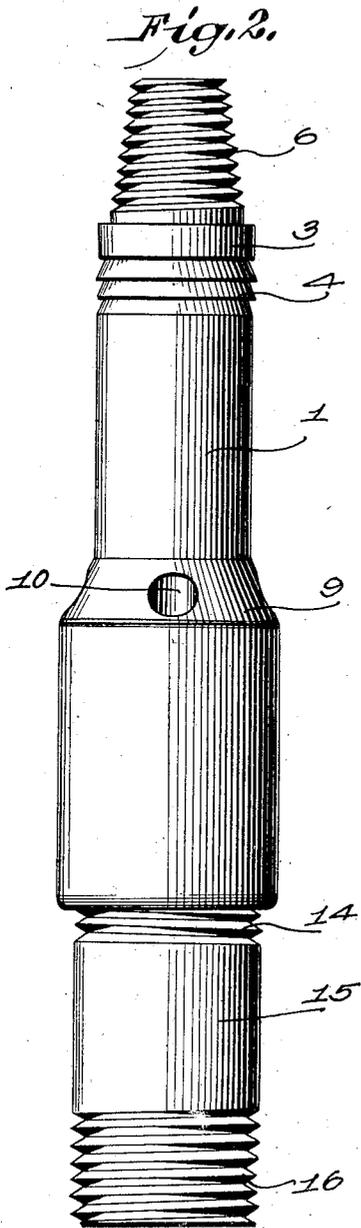
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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE

LORENZO DOW TODD, OF SHREVEPORT, LOUISIANA.

BAILER TOP.

Application filed July 27, 1922. Serial No. 577,383.

To all whom it may concern:

Be it known that I, LORENZO D. TODD, a citizen of the United States, residing at Shreveport, in the parish of Caddo and State of Louisiana, have invented certain new and useful Improvements in Bailer Tops; and I do hereby 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.

The present invention relates to improvements in bailer tops and has for an object to provide an improved top for the bailers of wells which affords many advantages in point of use over the bailer at present employed and in which the parts are few, simple and strong and wherein the fishing of the bailer from the well will be accomplished more easily and in a greater variety of ways than may be done at present with the type of bailer top now employed.

At the present time the old bailer top comprises merely a length of pipe having a bail at its top to which the cable is connected and should breakage occur in the cable or in the bail, there is but one fishing tool that the well driller might use in removing the injured bailer. This tool is called a latch-jack which is constructed and arranged to take into the bail of the old form of top; but inasmuch as it is not uncommon for the bail to break or to bend over to one side where it avoids the latch-jack, this tool is not particularly adapted for the purpose designed and the injury to the bail or its distortion makes it all the more difficult to salvage the bailer and its parts. Under such circumstances a great deal of time is lost in the operation of the well and by the operators and not infrequently the well has to be abandoned because of the failure to be able to dislodge the stuck bailer.

It is therefore a further object of this invention to so construct and arrange a bailer top as to permit of its readily being removed from the well in case of breakage to any of the parts and moreover to provide for the use of a great number and variety of fishing tools to insure that this operation may be carried out successfully thereby saving a great deal of time and labor and interfering as little as possible with the continuous operation of the well without requiring that the same be abandoned.

With the foregoing and other objects in

view, the invention will be more fully described hereinafter, and will be more particularly pointed out in the claim appended hereto.

In the drawings, wherein like symbols refer to like or corresponding parts throughout the several views.

Figure 1 is a vertical fragmentary section through a well showing the improved bailer top in place with portions of the bailer connected thereto.

Figure 2 is a side elevation on an enlarged scale of the improved bailer top with a section of pipes secured thereto.

Figure 3 is a vertical section taken longitudinally through the improved bailer top.

Figure 4 is a cross section taken on the line 4-4 in Figure 3.

Figure 5 is a top plan view of the bailer top, and

Figure 6 is a bottom plan of the same.

Referring more particularly to the drawings, 1 designates the shank of the improved bailer top which is preferably constructed solid throughout for purpose of strength, the shank being relatively narrow as compared with the diameter of the well casing 2. At its upper end the solid reduced shank 1 is provided with a circular shoulder 3 lying above a series of annular grooves or teeth 4 having inclined outer edges projecting downwardly with upwardly undercut notches in which to engage the parts of a fishing tool, such for instance as a slip socket. Above the shoulder 3, the shank 1 is tapered upwardly forming a frusto-conical end 5, the top of which is truncated and on the outer tapering surface of which are screw threads, these running for instance in a right hand direction. The top thus provides for receiving an ordinary wire line rope socket 7.

Below the shank 1 the improved bailer top is expanded into an enlarged hollow base 8, a shoulder 9 being formed between the reduced and the enlarged parts through which are a number of ports 10 shown to be four in number although the same may be provided in greater or less numbers as may be found necessary or desirable. These ports provide for the flowing of the water between the interior of the hollow base 8 and the space within the well extending about the shank 1. Within the hollow base 8 are shoulders 11 and 12 arranged in terraced or stepped relations and reducing the diameter of the in-

terior at the point through which entry is made by the ports 10. The major portion of the interior surface of the hollow enlarged end 8 is threaded say with left hand threads to engage with similar threads 14 upon the pipe section 15. This pipe section is also provided with threads 16 extending in an opposite, say a right hand direction and the bailer pipe 17 is screwed on to the thread 16 as indicated in Figure 1.

In the use of the device, after the well has been drilled by a rotary drilling rig and water is left standing in the same, in order to test the casing, a bailer is connected together and lowered into the well, being reciprocated up and down to raise the water. It is not uncommon that when this action is in progress the bailing line breaks or in some unexplained manner the bailer becomes fast in the casing or in the bottom of the well and under such circumstances the advantages of using the improved bailer will be found to be greatest.

Should the bailing line break, a slip socket may be run down into the hole and engaged with the grooves or teeth 4 in the shank 1, and the bailer thus elevated inasmuch as this engagement affords a tight grip. However, assume that the bailer becomes stuck to such an extent that the slip socket will not hold. In this event the driller may rotate the pipe to the right and back off the bailer top at the top portion of the threaded pipe section 15. Meanwhile the lower connection of the pipe section will not become detached from the rest of the bailer pipe on account of the differences in the screw threads. When the bailer top is thus elevated and removed from the well, there are quite a number of fishing tools that may be run into the well to remove the remainder of the bailer thereby assuring the driller a great many more chances in clean-

ing out the well and proceeding with drilling operations.

In view of the foregoing it will be apparent that the improved bailer top will afford free access of water up through the well without sacrificing the strength or compactness of the top and the same will afford opportunity for the exercise of a greater number of methods and implements in fishing out the bailer should it become jammed in the well.

It is obvious that various changes and modifications may be made in the details of construction and design of the above specifically described embodiment of this invention without departing from the spirit thereof, such changes and modifications being restricted only by the scope of the following claim:

What is claimed is:

A bailer top comprising a solid shank having exterior angular teeth and a tapering threaded upper end adapted to be screwed into a rope socket, and having at the lower end of the shank an enlarged hollow base internally threaded at its lower end with the threads running oppositely to the threads on the tapering upper end of the shank, a pipe section threaded at its upper end into said hollow base, said enlarged hollow base providing a shoulder between the same and the shank and the bailer top having openings extending through the shoulder to the interior of said base, said hollow base having stepped internal shoulders at the top of the internal threads to bind against said pipe section threaded into the bailer top and to strengthen the hollow base whereby the same may be screwed off of the upper end of said pipe section when the rope socket is turned in a direction to bind it on the tapering upper end of the shank.

LORENZO DOW TODD.