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BROKEN PIPE EXTRACTOR

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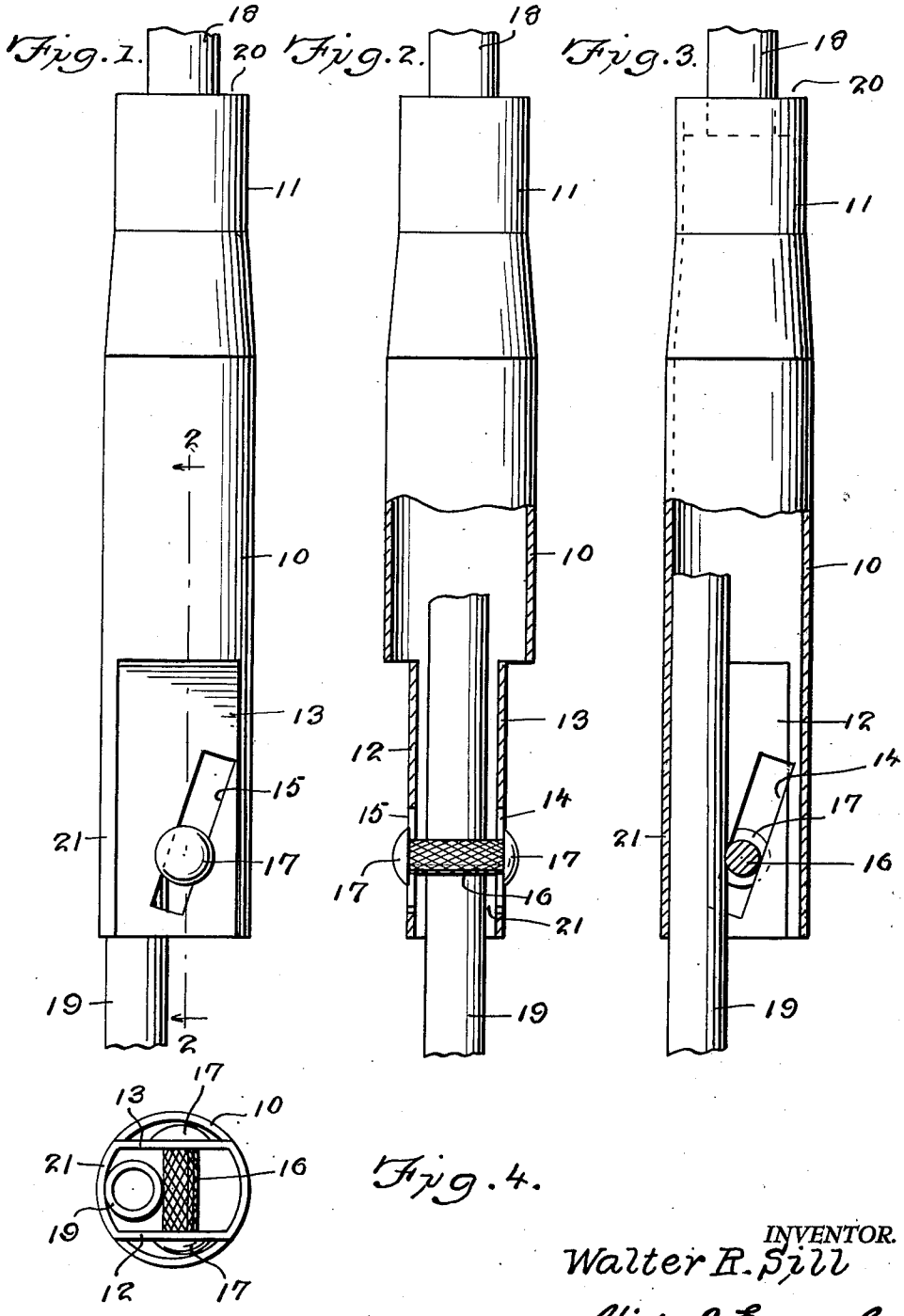


Fig. 4.

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BROKEN PIPE EXTRACTOR

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2 Claims. (Cl. 294—102)

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This invention relates to a tool for use in gripping and pulling broken pipes from oil or like deep wells.

The object of the invention is to provide a tool that is adapted for raising or extracting broken pipes and tubing of different sizes out of oil or like deep wells.

Another object of the invention is to provide a tool for extracting broken pipes from wells which is extremely simple and inexpensive to manufacture.

Other objects and advantages will be apparent during the course of the following description.

In the accompanying drawings forming a part of this application, and in which like numerals are employed to designate like parts throughout the same:

Figure 1 is a side elevational view of the tool illustrating a broken pipe gripped thereby;

Figure 2 is a sectional view taken on the line 2—2 of Figure 1;

Figure 3 is a side elevational view of the tool, with parts broken and in section;

Figure 4 is a bottom plan view of the tool.

Referring in detail to the drawings, the tool for extracting broken pipe from a well is preferably fabricated of steel and comprises a cylindrical, tubular body 10 having its upper end 11 reduced in diameter. The other end of the body 10 is open and bent or flattened to define a pair of spaced, parallel side walls 12 and 13 which define a socket therebetween. The end wall 12 is provided with an inclined slot 14, and there is an opposed, aligned, inclined slot 15 arranged in the other side wall 13. Projecting through the aligned slots 14 and 15 and mounted for movement therein is a cylindrical roller or shaft 16 which has its ends enlarged, as at 17, for mounting the shaft 16 in the slots, the roller having its surface knurled.

In using the tool for extracting broken pipe or rods from a well, the tool is provided with a suitable threaded aperture in its top 20 for receiving a suitable pipe 18 for lowering the tool down into the well. The end of the broken pipe to be extracted enters the socket formed by the space between the side walls 12 and 13, and the broken pipe 19 causes the shaft 16 to be pushed upwardly in the slots 14 and 15 until the top of the pipe 19 abuts the top or the upper end 20 of the tool. The tool is then slowly raised, causing the shaft 16 to be moved into frictional engagement to jam the broken pipe 19 against the end portion 21 of

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the tool. Then the tool with the pipe 19 locked or gripped therein can be quickly and easily raised from the well.

From the foregoing, it will be apparent that there has been provided a device for extracting broken pipe from wells which is compact, has few moving parts, and will handle pipes of various sizes.

As many embodiments may be made of this inventive concept, and as many modifications may be made in the embodiment hereinbefore shown and described, it is to be understood that all matter herein is to be interpreted merely as illustrative and not in a limiting sense.

I claim:

1. In a tool for extracting a broken pipe from a well, a cylindrical tubular body having its upper end reduced in diameter, a pair of side walls dependingly carried by said body and arranged in spaced, parallel relation with respect to each other to define a socket therebetween for the reception of said broken pipe, there being a first inclined slot arranged in one of said side walls, the other of said side walls being provided with an inclined slot arranged in alignment with said first slot, and a shaft projecting through said inclined slots and slidably arranged therein, the exterior surface of said shaft being knurled.

2. In a tool for extracting a broken pipe from a well, a cylindrical tubular body having its upper end reduced in diameter, a pair of side walls dependingly carried by said body and arranged in spaced, parallel relation with respect to each other to define a socket therebetween for the reception of said broken pipe, there being a first inclined slot arranged in one of said side walls, the other of said side walls being provided with an inclined slot arranged in alignment with said first slot, a shaft projecting through said inclined slots and slidably arranged therein, said shaft having its exterior portion knurled, and an enlarged head formed on each end of said shaft for maintaining the latter in said slots.

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