A. J. WOODFORD.

PUMP TOOL.

APPLICATION FILED JUNE 13, 1916.

1,226,431. Patented May 15, 1917.

FIG. 1.

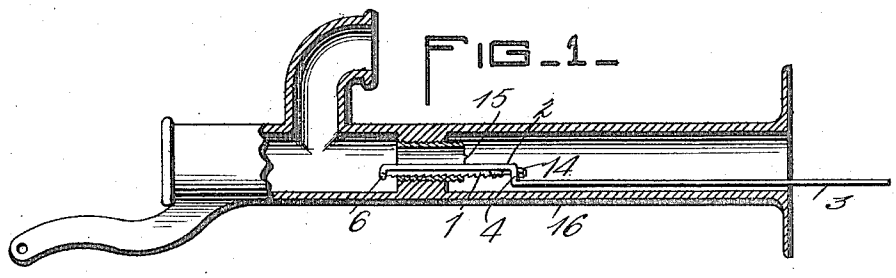


FIG. 2.

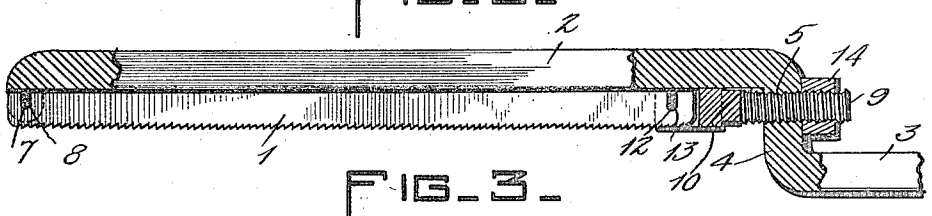


FIG. 3.

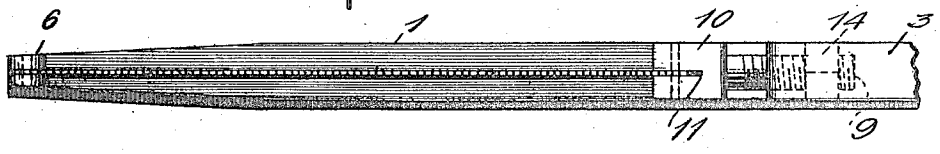


FIG. 4.

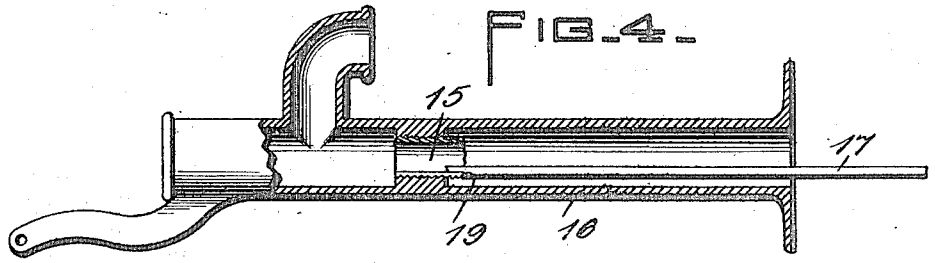
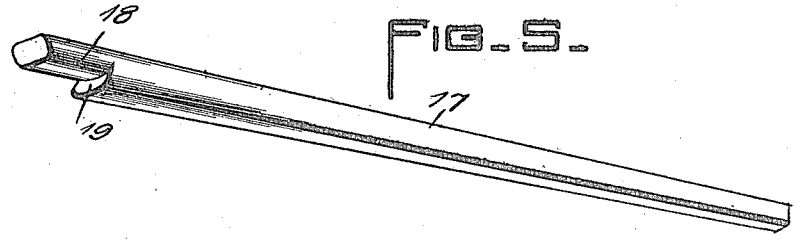


FIG. 5.



WITNESSES

John A. Phelps Jr.

H E Beck

INVENTOR

ARTHUR J. WOODFORD,

BY Munn & Co.

ATTORNEYS

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

ARTHUR J. WOODFORD, OF WORTHINGTON, MINNESOTA, ASSIGNOR OF ONE-FOURTH TO EDWARD F. BUCHAN AND ONE-FOURTH TO WILLIAM H. BUCHAN, BOTH OF WORTHINGTON, MINNESOTA.

PUMP-TOOL.

1,226,431. Specification of Letters Patent. Patented May 15, 1917.

Application filed June 13, 1916. Serial No. 103,457.

To all whom it may concern:

Be it known that I, ARTHUR J. WOODFORD, a citizen of the United States, and a resident of Worthington, in the county of Nobles and State of Minnesota, have invented an Improvement in Pump-Tools, of which the following is a specification.

My invention is an improvement in pump tools, and has for its object to provide a tool especially adapted for use in connection with pump heads for removing short sections of threaded pipe broken off in the head.

In the drawing:

Figure 1 is a sectional view of a pump-head showing the tool in use within it.

Fig. 2 is in part a side view, and in part a section of the tool.

Fig. 3 is an inverted plan view of the tool.

Fig. 4 is a sectional view of a pump-head showing the supplemental tool in use for detaching a split or divided section of a threaded and broken tube or pipe.

Fig. 5 is a perspective view of such supplemental tool.

My improved device comprises a saw 1, a shank 2, and a handle 3, the handle and the shank being integral, and the shank being offset laterally at 4 with respect to the handle.

The offset 4 has an opening 5 whose axis is parallel with the handle and the shank. At its free end the shank has a laterally extending lug 6, which is split and thus adapted to receive one end of the saw. A pin 7 is passed through the lug transversely of the slot, and through a notch 8 in the back of the saw, for connecting one end of the saw to the lug.

A screw 9 is passed through the opening 5, the said screw having a head 10 at its inner end, which is notched or recessed as at 11 in line with the split of the lug 6, for receiving the other end of the saw, and a pin 12 is passed transversely of this split, the pin engaging a notch 13 at the opposite end of the saw from the notch 8. A nut 14 is threaded onto the screw at the opposite side of the integral connection 4 from the head and it will be evident that by turning the nut in the proper direction the head 10 of the screw may be moved toward the integral connection 4 to tension the saw.

Referring to Fig. 2, it will be noticed the back of the blade is in contact with the adjacent face of the shank, so that the blade is supported throughout its extent.

In use, the saw is especially adapted for removing broken off pieces 15 of pipe threaded into pump heads 16. As known, the commonly used pump head is tapped just below the spout, that is about two feet from the lower end of the head, and the pipe which is tapped in at this point is frequently broken, thus rendering the pump head worthless unless the piece of pipe can be removed. The space within which the work must be done is cramped, and very inaccessible, being cut off at the upper end by the closure of the pump head, and made difficult at the opposite end by the distance from the said head. With the improved tool, however, the pipe may be split as indicated in Fig. 1, the handle 3 being of sufficient length to permit of a grasp of the same outside of the pump head. After the pipe has been split, the pieces may be removed by means of the tool 17 shown in Figs. 4 and 5.

This tool, as shown is a bar 17 of suitable size, and preferably of tapering form, and in general of square cross section. At the large end the bar is reduced on one face or rabbeted as indicated at 18, to form a shoulder 19 at the inner end of the rabbeted portion, and this shoulder as shown is undercut. This tool 17 is engaged with the split piece of pipe in the manner shown in Fig. 4, the shoulder 19 being engaged with the end of the pipe, after the said pipe has been split by the saw. By means of a suitable hammer or mallet, used on the small end of the tool, the section of pipe may be driven out without injuring the pump head. The improved saw can also be used for splitting the twisted off ends of pipes in pipe fitting, in the same manner as it is used in pumps, and for sawing key-ways in the hubs of pulleys, gear wheels, pinions, and the like.

I claim:

A tool for the purpose specified consisting of a straight elongated shank and handle arranged in different but parallel plane

and having a right angular offset connecting them integrally, a screw inserted through said offset and a nut applied thereto and seated against the back of the offset, and a saw of uniform width whose ends are connected with the said shank and screw respectively and whose back is seated against the shank throughout the length of the latter as described.

ARTHUR J. WOODFORD.

Witnesses:
A. J. FAUSKEE,
S. B. THOMPSON.

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