

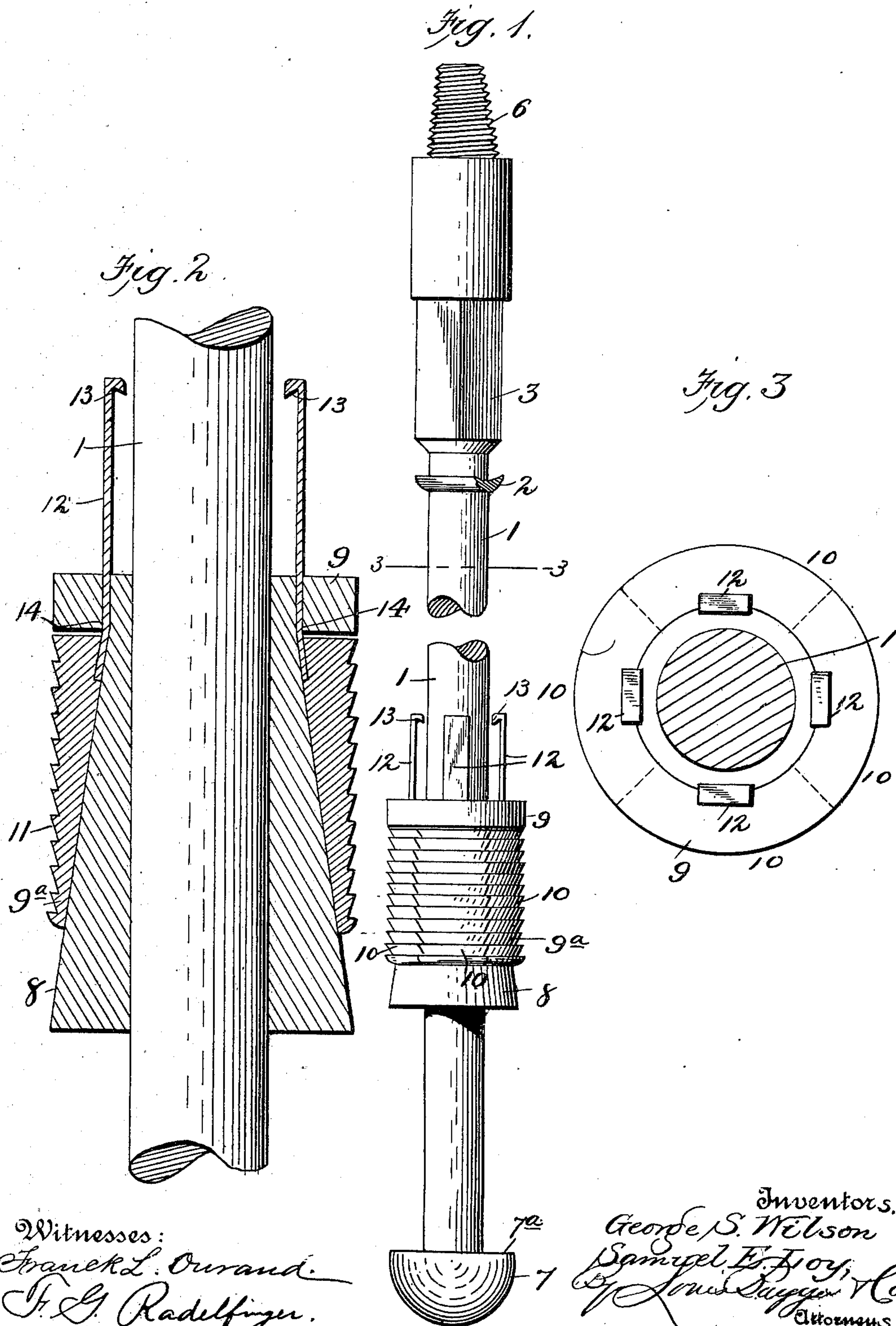
No. 672,814.

Patented Apr. 23, 1901.

G. S. WILSON & S. E. LOY.
DRILL CASING EXTRACTOR.

(Application filed Dec. 31, 1900.)

No Model.)



UNITED STATES PATENT OFFICE.

GEORGE S. WILSON AND SAMUEL E. LOY, OF AURORA, MISSOURI.

DRILL-CASING EXTRACTOR.

SPECIFICATION forming part of Letters Patent No. 672,814, dated April 23, 1901.

Application filed December 31, 1900. Serial No. 41,734. (No model.)

To all whom it may concern:

Be it known that we, GEORGE S. WILSON and SAMUEL E. LOY, citizens of the United States, residing at Aurora, in the county of Lawrence and State of Missouri, have invented new and useful Improvements in Drill-Casing Extractors, of which the following is a specification.

Our invention relates to implements for extracting drill-casings from drill-holes; and the object of the same is to provide a simple and efficient tool for withdrawing the casings from drill-holes and one which will do the work quickly and reliably. In drilling for oil or minerals the drill-casings are very liable to become wedged into the hole, and these casings have been very difficult to remove. We have devised a tool which may be lowered into the casing to engage it and withdraw it from the hole.

We attain the object referred to by means of the construction shown in the accompanying drawings, in which—

Figure 1 is a side elevation of a tool with parts broken away made in accordance with our invention. Fig. 2 is a side elevation of a fragment, partly in section. Fig. 3 is a section on the line 3 3, Fig. 1.

Like numerals designate like parts wherever they occur in the different views.

The numeral 1 designates a rod or stem having a dished collar 2 formed thereon. At 3 the stem is squared for the accommodation of a wrench and at 6 is tapered and threaded for the attachment of a lowering-rod. The opposite end of this stem is provided with a head 7, having a square shoulder 7^a. Fitted to slide upon the stem 1 is a conical sleeve 8, having a flange 9 at one end. Surrounding the sleeve 8 is a sliding expansible chuck 9^a, formed of segments 10, said segments being stepped, as at 11, to have a gripping action upon the interior surface of the drill-casing when the tool is drawn up. Each section 10 has a spring-latch 12 secured to it, said latches having a downwardly-bent end 13 to engage the collar 2. The springs 12 pass through apertures 14 in the flange 9.

The operation of the tool is as follows:

When it is desired to remove a tight drill-casing, the tool is inserted in the casing until the expansible chuck 9 is within the bore, and the sliding rod is then jerked up to expand the chuck and compel it to grip the casing. When the casing has been loosened by this action, the tool may be withdrawn by lowering the rod until the collar 2 strikes the head 9, thus loosening the chuck and engaging the catches 13 and permitting it to be withdrawn.

From the foregoing it will be obvious that our invention is simple in construction, not liable to get out of order, and will be found practical and efficient for its purpose.

Having thus fully described our invention, what we claim is—

1. In an implement of the class described, the combination, of a uniform rod or stem, having an enlarged head on its lower end, an exteriorly-coned sleeve slidingly mounted on said stem small end up and having a flange on said small end, a stepped segmental chuck movably mounted on said sleeve, spring-latches passing through apertures in said flange and joined to said segments, means for engaging said latches to raise said segments.

2. In an implement of the class described, the combination, of a uniform rod having an enlarged head on its lower end, a conical sleeve slidingly mounted small end up, on said rod, said sleeve having a flange on its upper or smaller end, a segmental chuck mounted on said sleeve, spring latch-bars secured at their lower ends to said segments passing through apertures in said flange and having hooked upper ends, and means mounted on said rod to engage said hooked upper ends to raise the said chuck, substantially as described.

In testimony whereof we have hereunto set our hands in presence of two subscribing witnesses.

GEORGE S. WILSON.
SAMUEL E. LOY.

Witnesses:

D. E. HARDING,
JOHN L. MCNATT.