

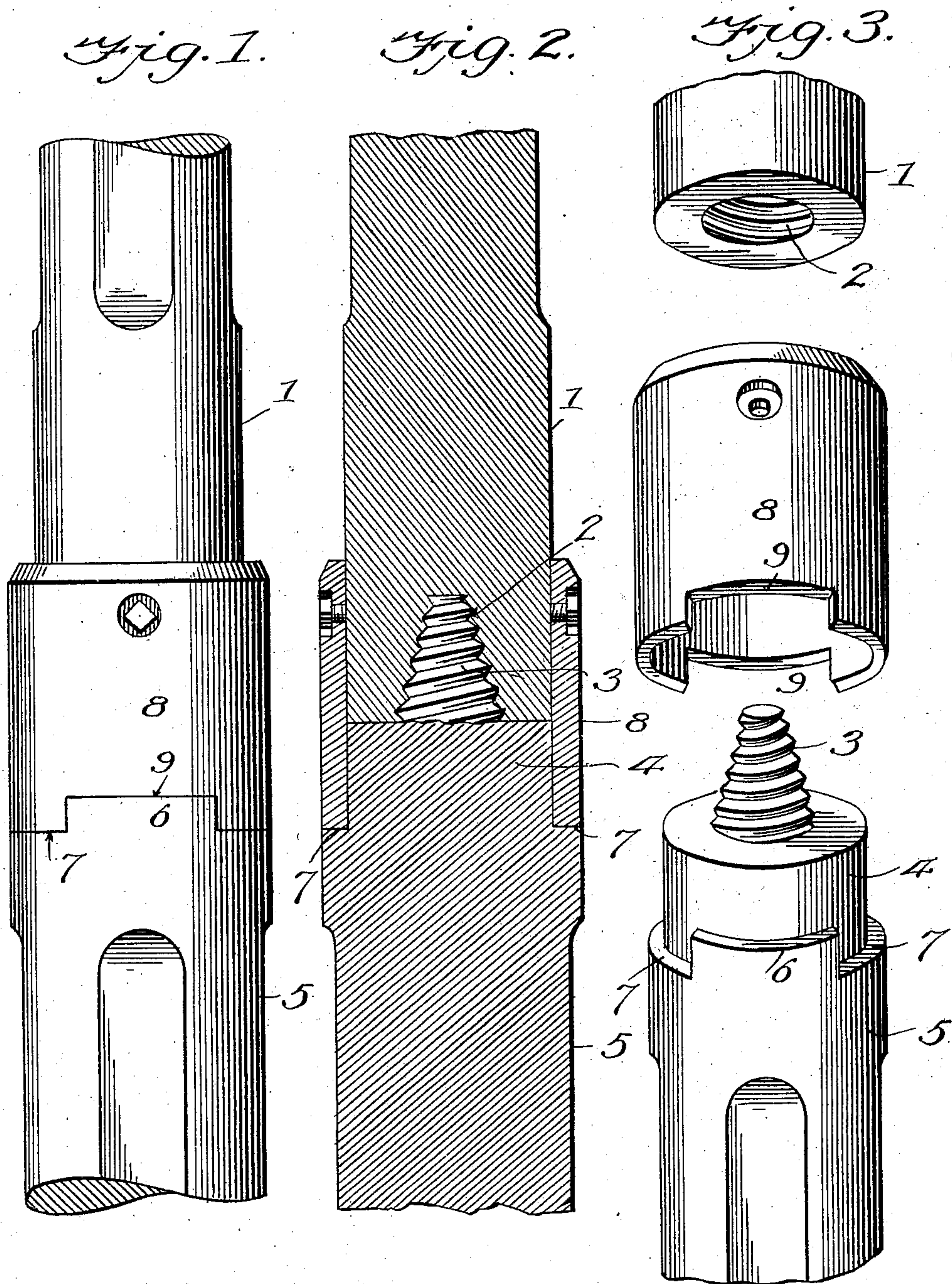
No. 751,241.

PATENTED FEB. 2, 1904.

F. ASH.
DRILL JOINT.

APPLICATION FILED JULY 3, 1903.

NO MODEL.



WITNESSES:

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UNITED STATES PATENT OFFICE.

FRED ASH, OF ADA, OHIO.

DRILL-JOINT.

SPECIFICATION forming part of Letters Patent No. 751,241, dated February 2, 1904.

Application filed July 3, 1903. Serial No. 164,189. (No model.)

To all whom it may concern:

Be it known that I, FRED ASH, a citizen of the United States, residing at Ada, in the county of Hardin and State of Ohio, have invented new and useful Improvements in Drill-Joints, of which the following is a specification.

My invention relates to new and useful improvements in drill-joints especially adapted for use in oil-wells; and it relates more particularly to means for securing the drills so as to prevent displacement thereof when in position within a well.

The object of the invention is to provide simple means for securely fastening the drill to its holding-rod, said means being of simple and inexpensive construction adapted to be readily applied.

The invention consists in the novel construction and combination of parts hereinafter more fully described and claimed, and illustrated in the accompanying drawings, showing the preferred form of my invention, and in which—

Figure 1 is a side elevation of a portion of the drill and its holding-rod, said drill being shown secured to the rod by means of my improved fastening device. Fig. 2 is a longitudinal section through the parts shown in Fig. 1, and Fig. 3 is a perspective view of said parts detached.

Referring to the figures by numerals of reference, 1 is a drill-holding rod having an internally-screw-threaded recess 2 in the center of one end. This recess is adapted to receive a threaded centering-pin 3, arranged at the reduced end 4 of a drill 5. It will be noted that the diameter of the reduced portion 4 of the drill 5 is equal to that of the rod 1. At the inner end of this reduced portion of the drill is a shoulder 6, having two oppositely-opposed rectangular recesses 7. A sleeve 8 is mounted upon the rod 1, and one end thereof is recessed, as shown at 9, said recesses being equal in area to those portions of shoulder 6 which are arranged between the recesses 7. To secure the drill to the rod, the pin 3 is placed in engagement with the recessed end of the rod 1. Sleeve 8 is then moved downward upon the rod until its recessed end engages

the recessed shoulder 6. Said sleeve is then secured to the rod by means of screws 10 or other suitable fastening means, which extend through apertures 11 in the sleeve and engage the rod 1. When the parts have been secured together by the means herein described, it will be seen that the loss of the drill is prevented in view of the fact that the same cannot become unscrewed from the rod 1. As the sleeve 8 fits snugly about the rod 1 and the reduced end of the drill, all strain upon the centering-pin 3 is removed, and said pin merely serves to hold the drill and rod together.

The coupling herein described is extremely simple and inexpensive in construction and, as is obvious, can be readily applied.

In the foregoing description I have shown the preferred form of my invention; but I do not limit myself thereto, as I am aware that modifications may be made therein without departing from the spirit or sacrificing any of the advantages thereof, and I therefore reserve the right to make such changes as fairly fall within the scope of my invention.

Having thus described the invention, what is claimed as new is—

The combination with a rod having a tapered threaded recess in one end thereof, of a drill having a reduced end, the diameter of the reduced portion being the same as the diameter of the rod, a tapered threaded centering-pin extending from said end and adapted to engage the threaded recess, a shoulder at the inner end of the reduced portion of the drill and provided with two oppositely-opposed rectangular recesses, said recesses being equal in area to those portions of the shoulder which are arranged between the recesses, a sleeve loosely mounted upon the rod and having recesses in one end adapted to engage the shoulder on the drill and set-screws within the sleeve for securing the same within the rod and preventing the rotation thereof.

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

FRED ASH.

Witnesses:

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W. S. McCOPPIN.