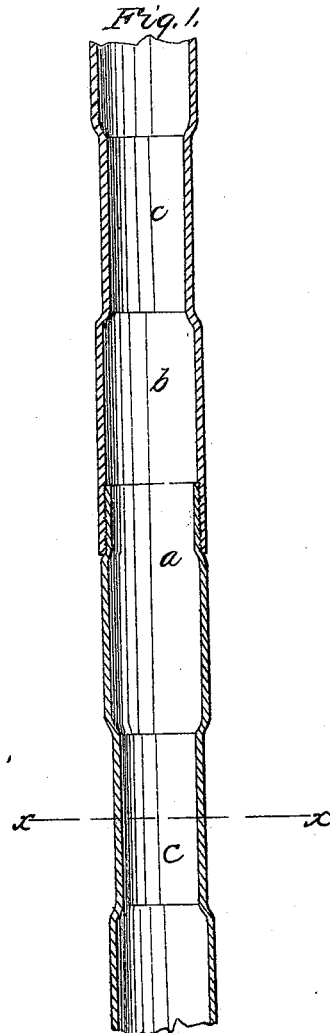


*J. H. Clapham.*

*Pipe Coupling.*

*No. 54,112.*

*Patented Apr. 24, 1866*



*Witnesses:*  
*William Hogan*  
*Chas. Smith*



*Inventor:*  
*J. H. Clapham*  
*per L. M. Cornell*  
*Atty*

# UNITED STATES PATENT OFFICE.

JAMES H. CLAPHAM, OF NEW YORK, N. Y.

## IMPROVED SHAFT FOR DRILLING.

Specification forming part of Letters Patent No. 54,112, dated April 24, 1866.

### *To all whom it may concern:*

Be it known that I, JAMES H. CLAPHAM, of the city and State of New York, have invented and made a certain new and useful Improvement in Tubular Rods for Well-Drills and Pumps; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the annexed drawings, making part of this specification, wherein—

Figure 1 is a longitudinal section of said tubular rod, and Fig. 2 is a cross-section at the line *x x*.

Similar letters denote the same parts.

Tubes have heretofore been made for wells with screws at the interior and exterior of the respective lengths, so as to screw said lengths together; but difficulty has heretofore been experienced in clamping the respective lengths while being screwed together. The tubes have frequently to be drawn up and taken apart hence the surfaces of the tubes become smooth where the wrenches or tongs are applied, and generally being oily, the use of tubes for pump-rods or for drill-rods has been generally abandoned.

The nature of my said invention consists in a tubular rod for well-drills and pumps, formed with male and female screws at the ends of the respective lengths, and with polygonal depression in the pipe near the ends of the lengths to receive the wrench or clamps employed in connecting or disconnecting the screw-couplings.

In the drawings, *a b* are two lengths of tubes or portions of them, the portion *a* having a male screw on its exterior surface, said end being contracted or swaged down sufficiently

to screw into the female screw cut inside one end of the pipe *b*. The pipe is compressed or swaged into a polygonal form near the ends of the lengths in positions convenient for being seized by the stationary clamp near the mouth of the well, and for the reception of the wrench or tongs employed for screwing or unscrewing the lengths of tubing. These depressions are shown at *c*. These polygonal portions of the tubes may be formed with any desired number of sides. I have shown six.

Plugs of wood or other material may be inserted in each length of pipe to prevent the tube filling in case of leakage, so that there will be but little weight of the tube in operating either a drill or working the pump, because said tube, being hollow, will partially float.

If desired, washers of leather or other anti-friction material may be clasped around the tubular pump or drill rods at suitable distances apart to prevent the said rod rubbing against the interior of the well in case the said rod is not perfectly straight.

What I claim, and desire to secure by Letters Patent, is—

The tubular rod for well-drills or pumps, formed with polygonal depressions for the reception of the clamps or wrenches, as specified.

In witness whereof I have hereunto set my signature this 4th day of December, A. D. 1865.

JAS. HY. CLAPHAM.

Witnesses:

LEMUEL W. SERRELL,  
CHAS. H. SMITH.