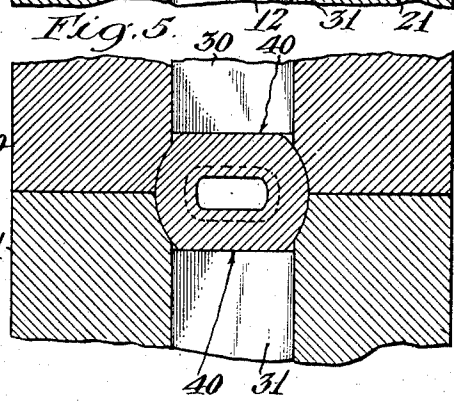
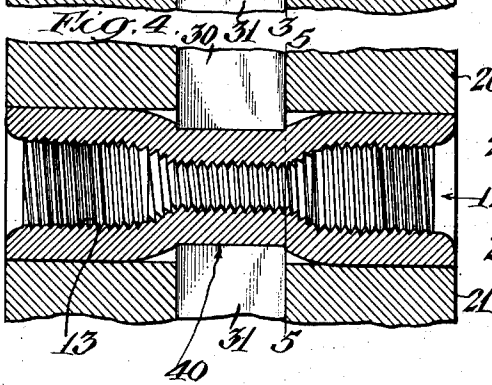
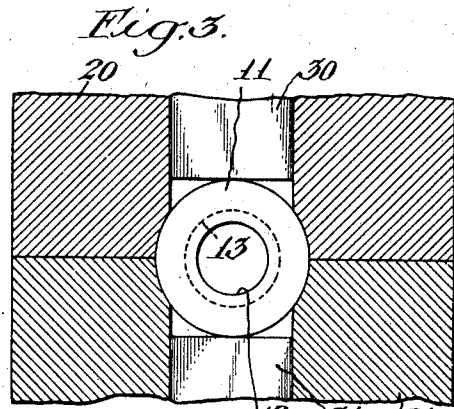
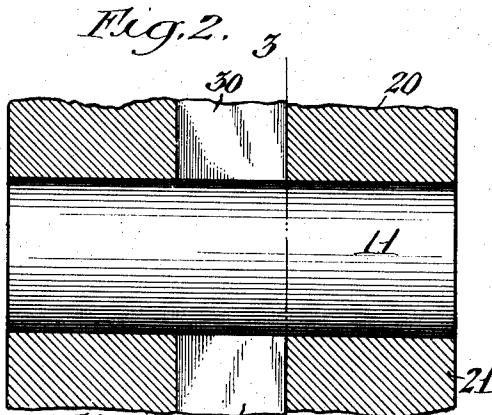
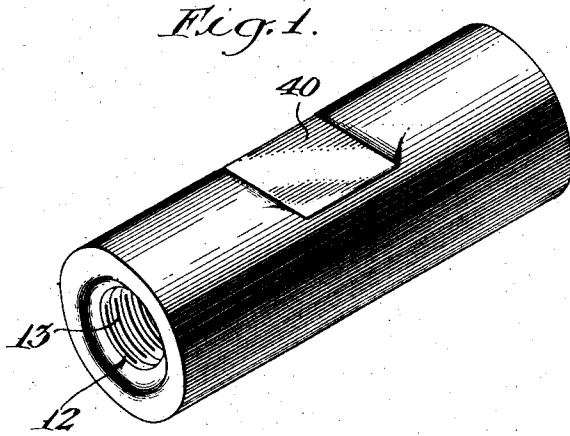


J. C. AXELSON.
 SUCKER ROD COUPLING.
 APPLICATION FILED APR. 11, 1921.

1,401,302.

Patented Dec. 27, 1921.



Inventor
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UNITED STATES PATENT OFFICE.

JULE C. AXELSON, OF ALHAMBRA, CALIFORNIA, ASSIGNOR TO AXELSON MACHINE COMPANY, A CORPORATION OF CALIFORNIA.

SUCKER-ROD COUPLING.

1,401,302.

Specification of Letters Patent. Patented Dec. 27, 1921.

Application filed April 11, 1921. Serial No. 460,203.

To all whom it may concern:

Be it known that I, JULE C. AXELSON, a citizen of the United States, residing at Alhambra, county of Los Angeles, and State of California, have invented a new and useful Improvement in Sucker-Rod Couplings, of which the following is a specification.

My invention relates to the production of petroleum oil and particularly to the apparatus used in pumping this oil from the ground.

In the production of petroleum, it is common practice to suspend a tubing in the well, a pump being suspended from this tubing and being actuated by means of sucker rods which pass downwardly through the tubing and operate the piston of the pump. These pump or sucker rods are commonly made of steel bars having threads at either end, the different lengths of rod being secured by coupling members. During the last few years there has been a great improvement in the quality and strength of the sucker rods with the result that these rods as now generally constructed are somewhat stronger than the couplings used therewith which are frequently pulled apart.

It is an object of my invention to provide a coupling for sucker rods which will be stronger than the present types of coupling, and which will prevent the large losses now being sustained due to coupling breakage.

It is a further object of my invention to provide means for economically producing such coupling.

Referring to the drawing which is for illustrative purposes only,

Figure 1 is a perspective view of the finished coupling.

Fig. 2 is a section through the die used in producing my invention with a heated coupling in place therein.

Fig. 3 is a section on a plane represented by the line 3—3 of Fig. 2.

Fig. 4 is a section through the apparatus shown in Fig. 2 after the coupling has been completed.

Fig. 5 is a section on a plane represented by the line 5—5 of Fig. 4.

In the production of this coupling, I use a cylindrical blank 11 of high grade cold rolled steel. The blank 11 is drilled with a cylindrical hole shown at 12 and is threaded throughout its length as shown at 13. The drilled and threaded blank is then inserted in a split die consisting of two members 20 and 21 in which it is solidly clamped. The blank is preferably heated to a bright red or white heat before being put in the die and immediately after being placed therein, plungers 30 and 31 are forced downwardly from the position shown in Figs. 2 and 3 into the position shown in Figs. 4 and 5. The blank being hot and plastic is formed into the shape shown in Fig. 1 having flat surfaces 40 on either side thereof for the reception of a wrench. By placing the member in the dies 20 and 21, its cylindrical form is retained and the interior threads are uninjured except in the central portion. By forcing the central portion inwardly, the cross section of the blank is maintained the same throughout its length, the interior hole being forced into the shape shown in Fig. 5. Such a coupling is extremely strong and cheap to produce.

I claim as my invention:

1. A method of producing a coupling for sucker rods comprising: preparing a hollow cylindrical body; heating said body; and compressing the center thereof to form flat faces to provide a grip for a wrench.

2. A method of producing a coupling for sucker rods comprising: preparing a hollow cylindrical body; threading the interior cavity of said body; heating said body; and compressing the center thereof to form flat faces to provide a grip for a wrench.

3. A method of producing a coupling for sucker rods comprising: preparing a hollow cylindrical body; heating said body; restraining said body to prevent distortion thereof; and compressing the center thereof to form flat faces to provide a grip for a wrench.

4. A method of producing a coupling for sucker rods comprising: preparing a hollow cylindrical body; threading the interior cavity of said body; heating said body; restraining said body to prevent distortion thereof; and compressing the center thereof to form flat faces to provide a grip for a wrench.

hollow cylinder interiorly threaded at each end; and a flattened central portion, the central portion being substantially as thick as the ends.

5. In testimony whereof, I have hereunto set my hand at Los Angeles, California, 15 this 4th day of April, 1921.

5. A sucker rod coupling comprising: a

JULE C. AXELSON.