

J. BURNS.
 WIRE LINE ROPE SOCKET.
 APPLICATION FILED JAN. 30, 1914.

Patented Aug. 18, 1914.

1,107,889.

FIG. 1.

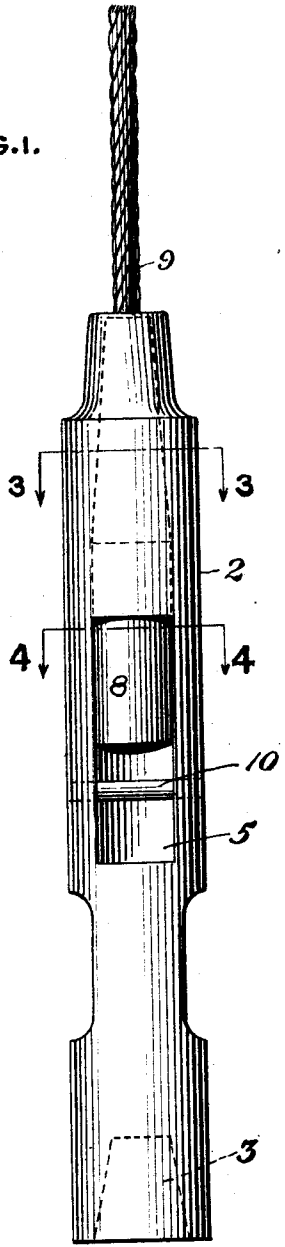


FIG. 3.

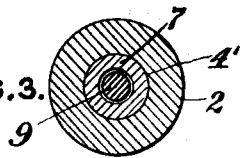


FIG. 4.

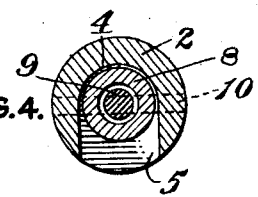
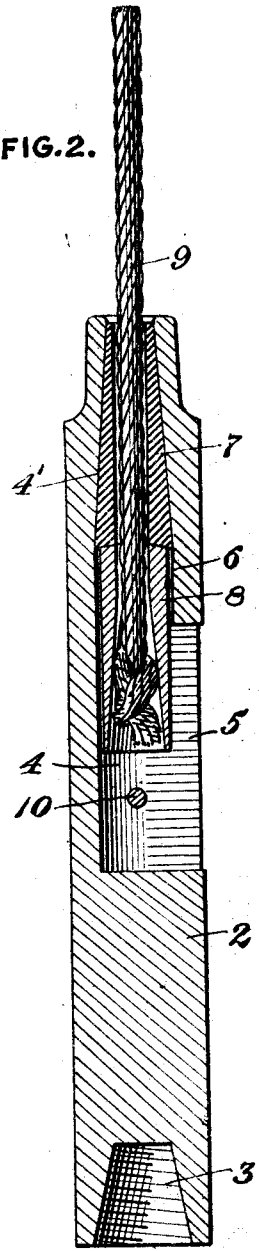


FIG. 2.



WITNESSES
A. E. Gaither
Ellis McConnell

INVENTOR
Joseph Burns
By Herbert D. Dole
attys

UNITED STATES PATENT OFFICE.

JOSEPH BURNS, OF OKMULGEE, OKLAHOMA.

WIRE-LINE ROPE-SOCKET

1,107 889.

Specification of Letters Patent. Patented Aug. 18, 1914.

Application filed January 30, 1914. Serial No 815,419

To all whom it may concern:

Be it known that I, JOSEPH BURNS, a citizen of the United States, and a resident of Okmulgee, in the county of Okmulgee and State of Oklahoma, have invented certain new and useful Improvements in Wire-Line Rope-Sockets, of which the following is a specification.

This invention relates to improvements in the rope sockets patented to me September 16, 1913, Nos. 1,073,469, and 1,073,470, the primary object herein being to provide a durable abutment for the swivel head, which preferably is inserted in the bore of the socket body through a side opening, thereby avoiding the expense of extending the bore through the entire length of the body.

In the accompanying drawings, Figure 1 is an elevation of a rope socket constructed in accordance with the invention, and Fig. 2 is a longitudinal sectional elevation taken at right angles to Fig. 1. Figs. 3 and 4 are cross-sections on lines 3—3 and 4—4, respectively, of Fig. 1.

Referring to the drawings, 2 designates the body of the socket which is formed with the usual threaded box 3 for receiving the tapered pin carried by the upper extremity of all socket-supported well tools. The axial bore 4 extends downwardly from the upper end of the body and terminates a considerable distance above box 3 so that a substantial portion of the length of the socket is solid, making the body materially stronger than in those constructions in which the bore intersects the screw box. For a distance upwardly from its lower end bore 4 is open laterally through the outer side face of the body as indicated at 5. The upper portion 4' of the bore tapers upwardly, the taper beginning an appreciable distance above slot or opening 5, leaving the intervening portion of the bore straight or cylindrical as indicated at 6. Tapered complementary with the tapered portion of the bore is the tubular abutment 7, formed preferably of tool steel. The abutment is slightly shorter than the length of passage 5 and is entered through the latter and wedged upwardly into the position indicated in Fig. 2.

8 is the tubular mandrel or swivel head to which the lower end of cable 9 is secured, the head being entered through passage 5 with its upper end adapted to engage the lower extremity of the abutment 7, the

transverse pin 10 holding the swivel head raised in part 6 of the bore and preventing it from becoming accidentally displaced through side opening 5.

The advantages of a swivel rope socket of this general character for wire drilling cables are fully set forth in my above mentioned patents.

By means of the improvement herein, a tool steel abutment may be provided for the swivel head upon which there can be no appreciable wear; also as the body bore does not extend to the screw box, the strength of the body is materially increased.

I claim:

1. The combination of a rope socket body formed with an axial bore open through its upper end with the upper portion of the bore tapering upwardly, a tubular abutment tapered complementary with the tapered portion of the bore, and a cable-holding head entered in the socket bore and adapted to engage the lower extremity of the abutment.

2. The combination of a rope socket body formed with an axial bore extending downwardly from its upper end, the bore being open laterally through one side of the body, a tubular abutment smaller than the lateral opening and adapted to pass therethrough into the body bore, the abutment and the upper portion of the bore being shaped to prevent upward removal of the abutment, and a cable-holding head adapted to engage the lower extremity of the abutment.

3. The combination of a rope socket body formed with an axial bore extending downwardly from its upper end with the upper portion of the bore tapering upwardly, the bore being open through one side of the body, a tubular upwardly tapering abutment smaller than the lateral opening and adapted to be entered in the body bore through the latter and pass upwardly into and fit the tapered portion of the bore, and a cable-holding head within the bore and adapted to engage the lower extremity of the abutment.

4. The combination of a rope socket body formed with an axial bore extending downwardly from its upper end, the bore being open through a side face of the body, a tubular abutment smaller than the lateral opening and entered therethrough into the bore, means for confining the abutment in the upper portion of the bore, and a cable-

holding head adapted to engage the lower end of the bore.

5 5. The combination of a rope socket body formed with an axial bore extending downwardly from its upper end with the upper portion of the bore tapered upwardly and with the bore open laterally through a side face of the latter, a tubular abutment smaller than the lateral opening and entered in the
10 bore through said opening, the abutment tapered complementary with and fitting with the tapered upper portion of the bore,

a swivel head smaller than the lateral bore opening and entered therethrough and adapted to engage the lower extremity of 15 the abutment, and means for holding the head against outward movement through the lateral opening.

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

JOSEPH BURNS.

Witnesses:

W. O. BASSETT,

WOODSON W. BASSETT.