C. O. SALBERG.

SUCKER-ROD FOR DEEP WELL PUMPS.

APPLICATION FILED JULY 6, 1917.

1,246,329. Patented Nov. 13, 1917.

Fig. 1.

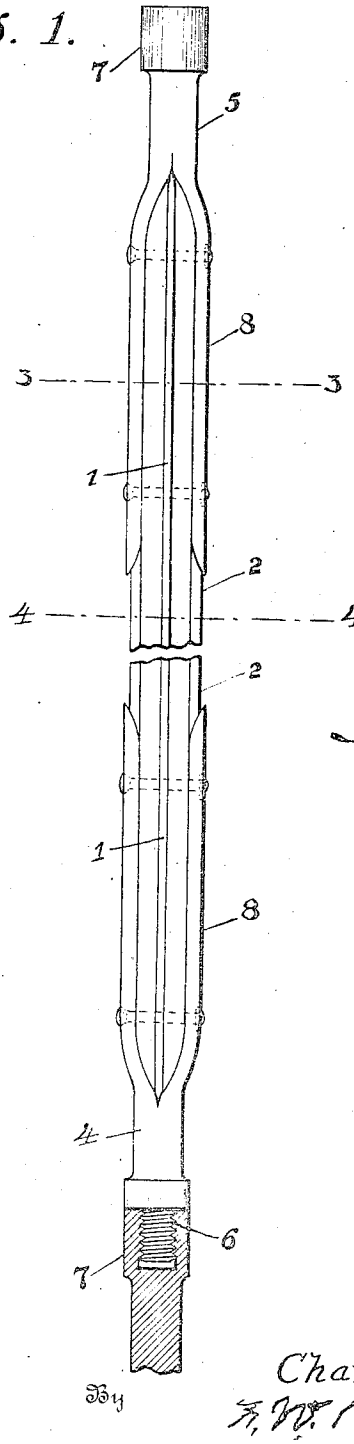


Fig. 2.

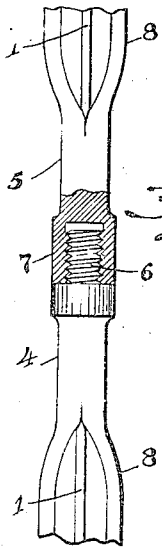


Fig. 3.

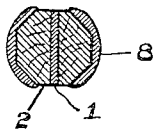
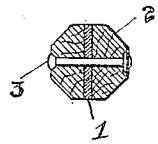


Fig. 4.



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SUCKER-ROD FOR DEEP-WELL PUMPS.

1,246,329. Specification of Letters Patent. Patented Nov. 13, 1917.

Application filed July 6, 1917. Serial No. 178,958.

To all whom it may concern:

Be it known that I, CHARLES O. SALBERG, a citizen of the United States, residing at Ridgway, in the county of Elk and State of Pennsylvania, have invented a new and useful Sucker-Rod for Deep-Well Pumps, of which the following is a specification.

My invention relates to improvements in sucker-rods for deep well pumps in which the rod proper is made up of any desired number of sections, which sections are connected together to produce a sucker-rod of the desired length. It is well understood that wells in many sections throughout the United States and elsewhere are of great depth, and hence it is important to produce a sucker-rod that will be light and of sufficient strength and rigidity for the purpose desired. It is well understood that sucker-rods composed entirely of metal are heavy, especially when a large number of sections are connected together to produce a rod of considerable length. In many instances oil wells are between two thousand and three thousand feet deep and consequently to produce a rod of that length entirely of metal would within itself be of great weight. Upon the other hand to form the sucker-rod sections entirely of wood they are more or less bulky, and necessarily so to produce the desired amount of strength and when the bulk is reduced the sections are liable to become broken.

The objects of the present invention are, first, to produce a sucker-rod made up of metal and wood, second, to maintain the desired amount of strength without increasing to any considerable extent the size of the sucker-rod proper, and third, to produce a sucker-rod that will be comparatively light, thereby reducing the power required for operating deep well pumps.

With these objects in view the invention consists in the novel construction and arrangement of parts, hereinafter described, illustrated in the accompanying drawings, and particularly pointed out in the appended claim, it being understood that various changes in the form, proportions, size and minor details of construction may be made within the scope of the appended claim, without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawing:

Figure 1 is a view of a sucker rod section, showing the socket end of an adjacent section properly connected.

Fig. 2 is a view showing portions of two sections properly connected together.

Fig. 3 is a section on line 3—3, Fig. 1.

Fig. 4 is a section on line 4—4, Fig. 1.

Similar numerals of reference indicate corresponding parts throughout the several figures of the drawings.

In the accompanying drawing, 1 represents the center metallic bar which is formed of sufficient size and strength to constitute what might be deemed the reinforcing member of the sucker-rod proper. Upon the side faces of the metal bar are located the wooden side members or cheek pieces 2, which are preferably of the form shown in Figs. 3 and 4, but the exact geometrical formation of the side pieces 2 is immaterial, as it will be understood that other shapes may be employed without departing from the nature of my invention.

For the purpose of properly connecting the wooden members or side pieces 2 to the metallic bar, suitable cross rivets 3 or their equivalents are employed. From the ends of each section are extended the metallic heads 4 and 5, the metallic head 4 being provided with the screw threaded shank 6 and the head 5 provided with the screw threaded socket 7, said shanks and sockets being connected together in the usual manner. The heads 4 and 5 are each provided with the spaced members 8, which spaced members are adapted to fit over and upon the wooden side members 2 as illustrated in Figs. 1, 2 and 3.

For the purpose of preventing any accidental breaking of the portions of the wooden cheek pieces 2 located between the members 8 the metallic bar 1 should be formed of such a length that its ends will come in close contact with the juncture of the members 8. In the drawings I have shown the members 8 spaced from each other, but it is obvious that the same result can be accomplished by forming what might be termed ferrules and locating and securing the same

to the ends of the sucker rod sections, but I prefer to form the metal connection as shown. In use any desired number of sections as shown in Fig. 1 are connected together to produce a rod of sufficient length. In practice the sections are usually from ten to twenty feet or possibly longer, reference being had to convenience in handling and connecting the sections.

I have described the present invention as a sucker-rod for oil wells and it is primarily intended for actuating pumps, but of course, the use may be varied as for instance it will be readily seen the same device can be used for gripping any articles located at the bottom of a well, as for instance lost tools.

For the purpose of properly securing the members 8 to the ends of the sucker rod sections proper, rivets or their equivalents such as shown in Fig. 4 should be employed, which rivets of course would extend through the members 8, the side pieces 2 and the metallic center 1, substantially as illustrated in dotted lines, Fig. 1.

Having fully described my invention what I claim as new and desire to secure by Letters Patent, is—

As an improved article of manufacture, a sucker rod section consisting of a center metallic bar formed of a length to correspond substantially with the length of the sucker rod, non-metallic bars located upon the opposite sides of said metallic bar, the opposite ends of the sucker rod sections provided with metallic heads adapted to embrace the ends of the non-metallic bars and means for securing the metallic and non-metallic bars together.

In testimony that I claim the above, I have hereunto subscribed my name.

CHARLES O. SALBERG.