

No. 679,889.

Patented Aug. 6, 1901.

C. I. DORN.

SAND LINE AND PUMP OR BAILER CONNECTION.

(Application filed Aug. 16, 1900.)

(No Model.)

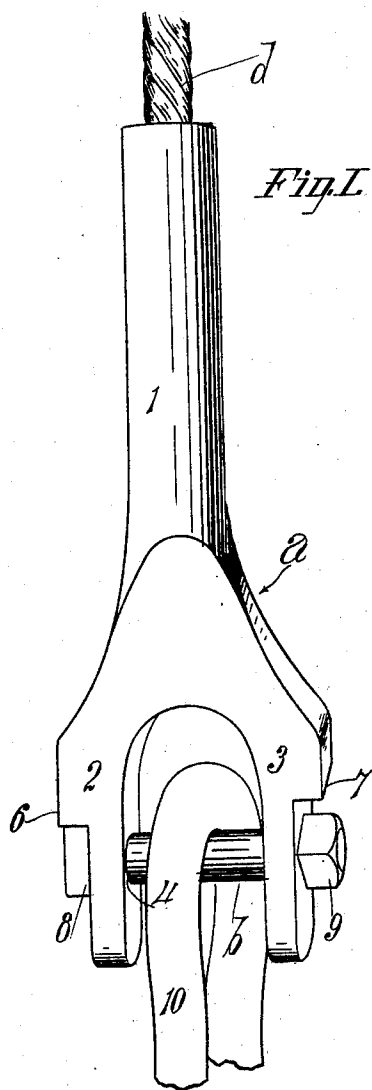


Fig. I

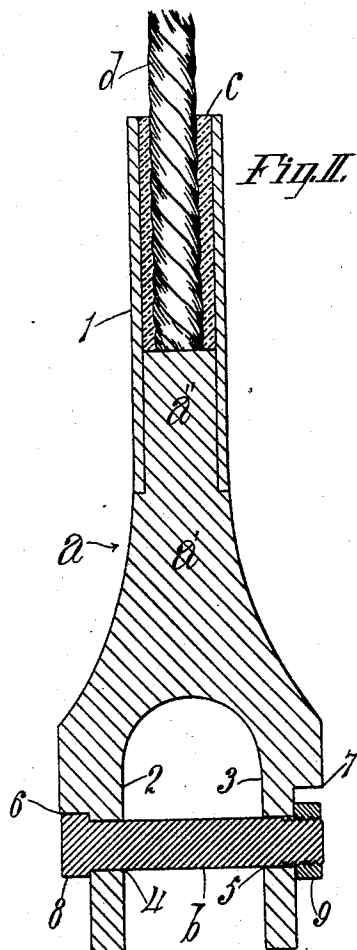


Fig. II

Witnesses

Dwight Ingman.

J. Townsend.

Inventor:  
Charles I. Dorn  
by Townsend Bros  
his atty

# UNITED STATES PATENT OFFICE.

CHARLES I. DORN, OF BARSDALE, CALIFORNIA.

## SAND-LINE AND PUMP OR BAILER CONNECTION.

SPECIFICATION forming part of Letters Patent No. 679,889, dated August 6, 1901.

Application filed August 16, 1900. Serial No. 27,084. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES I. DORN, a citizen of the United States, residing at Bardsdale, in the county of Ventura and State of California, have invented a new and useful Sand-Line and Pump or Bailer Connection, of which the following is a specification.

The object of this invention is to provide a superior, cheap, and simple connection for connecting a sand-line with a pump or bailer for use in oil-wells and other bored wells. My invention is specially designed for using the sand-pump and the bailer in the drilled or bored well below the bottom of the partially-inserted well-casing.

During the operation of boring and drilling oil-wells the bottom of the casing may be anywhere from one foot to five hundred feet or more from the bottom of the well, and heretofore great inconvenience and loss have been involved through the catching of the sand-line connection on the bottom of the well-casing, whereby the sand-line is often broken, thus leaving the sand-pump or bailer, as the case may be, at the bottom of the well, from which it must, if possible, be fished out at great expense of time and labor. This accident with the appliances now in use frequently causes the total loss of valuable wells.

It is an object of my invention to avoid this trouble and also to prevent the detaching of the bailer or sand-pump by reason of the unscrewing of the nut or bolt which supports the bailer or pump.

These objects are attained by the cheap and simple appliance herein described and claimed.

The accompanying drawings illustrate my invention.

Figure I is a perspective view of my newly-invented sand-line and pump or bailer connection. A fragment of the sand-line is shown and also a fragment of the bail of the sand-pump or bailer. Fig. II is a longitudinal section of the same along the axis of the bolt.

The connection *a* is provided at one end with a tubular shank 1 and at the other end with two arms 2 3, projecting therefrom in the form of a U and perforated at 4 5 to receive a bolt *b*.

6 indicates a lug or shoulder on the outside

of one of the arms to project upward above the perforation 4 through said arm 2. 7 indicates a corresponding lug on the outside of the other arm above the bolt hole or perforation 5 in said arm. The bolt *b* is inserted through the arms and is provided with a head 8, which fits against the under side of one of the lugs 6. 9 indicates the nut of the bolt screwed on the other end of the bolt beneath the lug 7 on the other arm. The lug 7 on the other arm is close to the perforation 5, at a distance therefrom sufficiently great to allow the nut to be turned.

*c* indicates a fastening, of Babbitt metal, molded in the tubular portion of the shank 1 around the wire rope or cable, which is held in place in the socket formed by the tube 1.

In manufacturing the connection the body portion (indicated by *a'*) will preferably be formed of a forging having a cylindrical stem *a''* at its upper end, from which stem the lugs or shoulders 6 7 slope downward and outward to a width equal to the length of the bolt which is to retain the bail of the bailer, thus to form guards for the bolt and nut. The tube 1 will consist of a pipe fitted upon the cylindrical stem *a''* and welded thereon, leaving a sufficient portion of the tube projecting above the stem *a''* to form a socket into which the rope *d* will be inserted, and the Babbitt-metal fastening *c* will be poured to hold the rope. It is to be understood that the length and thickness of the tube and stem can be varied to increase the strength to any extent desired.

The lugs or shoulders 6 7 slope outwardly away from the tube and terminate abruptly above the perforations 4 5, so that the bolt, with its nut, will not strike against the inwardly-projecting lower ends of the sections of the casing at the joints when the sand-pump or bailer is being drawn up.

In practice the attendant will hold the appliance in position with the arm 3 nearest him, so that he can insert the bolt readily through from the side nearest the hole, thus bringing the nut on the side next the attendant. The head 8 of the bolt fits against the shoulder 6, and the bolt is thus prevented from turning without further attention upon the part of the attendant, who will then screw

the nut 9 home underneath the lug or shoulder 7.

In Fig. I, 10 indicates a fragment of the bail of a bailer or sand-pump.

5 When the sand-pump or bailer is being drawn out of the well, the lugs or shoulders 6 7 prevent the nut or bolt from striking the bottom of the casing or the joints thereof, and thus prevents the nut or bolt from being  
10 unscrewed or broken off.

What I claim, and desire to secure by Letters Patent of the United States, is—

1. A sand-line and pump or bailer connection provided at one end with a tubular shank,  
15 and provided at the other end with two arms perforated to receive a bolt; a lug on the outside of one of the arms to project outward above the perforation through said arm; a  
20 lug on the outside of the other arm above the bolt-hole; a bolt inserted through the arms and provided with a head which fits against the under side of one of said lugs; and a nut  
25 screwed on the other end of the bolt beneath the lug on the other arm, said lug on the other arm being close to the perforation and at a distance therefrom sufficiently great to allow the nut to be turned.

2. A sand-line and pump or bailer connection provided at one end with a tubular shank,  
30 and provided at the other end with two arms perforated to receive a bolt; a lug on the out-

side of one of the arms sloping from the shank downward and outward to project outward above the perforation through said arm; a  
35 like sloping lug on the outside of the other arm above the bolt-hole; a bolt inserted through the arms and provided with a head which fits against the under side of one of said lugs; and a nut screwed on the other end  
40 of the bolt beneath the lug on the other arm, said lug on the other arm being close to the perforation and at a distance therefrom sufficiently great to allow the nut to be turned.

3. A sand-line and pump or bailer connection comprising a shank provided at its upper  
45 end with a tube and at its lower end with arms which are perforated for holding a bolt and are furnished between the tube and the perforations with shoulders which slope outwardly away from the tube and terminate  
50 abruptly above the perforations, substantially as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, at the city of Bakersfield, California, this 9th day of August,  
55 1900.

CHARLES I. DORN.

Witnesses:

I. B. HOBSON,  
GEORGE HAY.