F. S. & G. W. BALLARD.

PUMP ROD COUPLING.

APPLICATION FILED FEB. 26, 1912

1,107,876. Patented Aug. 18, 1914.

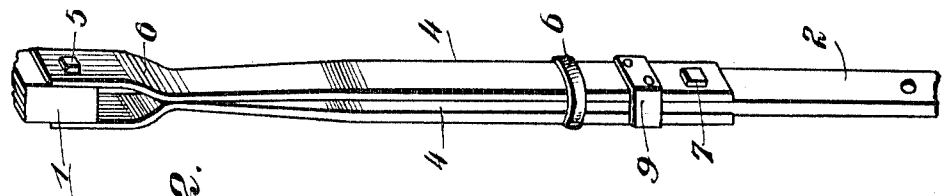


Fig. 2.

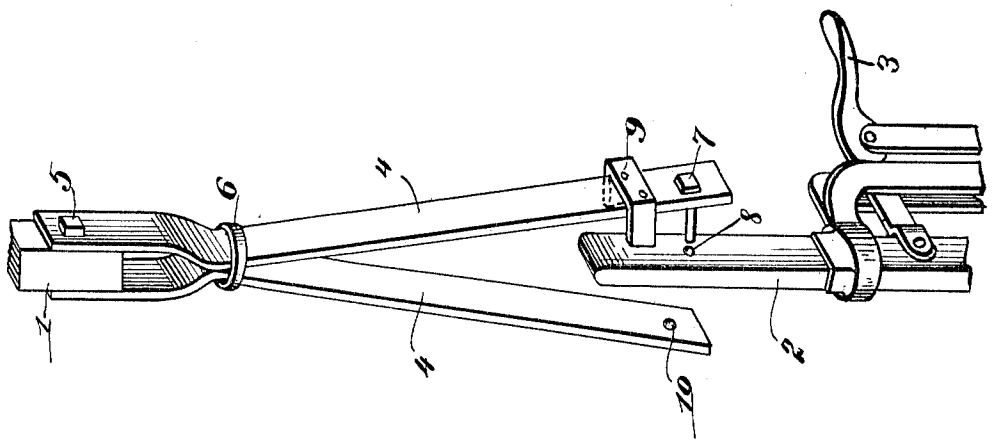


Fig. 1.

WITNESSES

INVENTORS

Frank S. Ballard and
George Wm. Ballard
By Wm. C. Whittemore Attorney

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

FRANK S. BALLARD AND GEORGE WM. BALLARD, OF DUFF, NEBRASKA.

PUMP-ROD COUPLING.

1,107,876. Specification of Letters Patent. Patented Aug. 18, 1914.

Application filed February 26, 1912. Serial No. 679,967.

To all whom it may concern:

Be it known that we, FRANK S. BALLARD and GEORGE WM. BALLARD, citizens of the United States, residing at Duff, in the county of Rock and State of Nebraska, have invented certain new and useful Improvements in Pump-Rod Couplings; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Our invention relates to certain new and useful improvements in coupling devices for wind mill and other pump rods, and has for its object to provide a coupling which may be quickly and easily connected or disconnected and which may also be economically produced.

With these ends in view, our invention consists in the details of construction and arrangement hereinafter particularly described.

In order that those skilled in the art to which our invention relates may know how to make and use the same and to fully appreciate its advantages, we will proceed to describe the construction and the manner of applying and disconnecting the same, referring by numerals to the accompanying drawings in which:—

Figure 1 is a perspective view showing the coupling released from an ordinary pump sucker rod. Fig. 2 is a similar view showing the coupling device connected to the reciprocatory pump rod.

Similar reference numerals indicate like parts in both figures of the drawings.

1 represents the lower end of an ordinary pump wind mill rod and 2 a vertical reciprocatory pump rod adapted to be operated by a wind mill, or by a handle 3, in any suitable manner.

Our improved coupling device for connecting quickly and easily the mill rod 1 with the reciprocatory rod 2, consists of two metal bars 4—4 bent near their upper extremities as clearly shown to embrace the end of the mill rod to which they are attached by an ordinary bolt 5. These bars are so bent that when attached to the mill rod they will contact a short distance from the lower extremity of the mill rod and constitute a fulcrum upon which the longer free ends may vibrate as springs when they are embraced and confined within a slidable ring 6. The lower end of one of these bars is provided with a bolt or pin 7, adapted to pass through a suitable hole 8 in the upper end of the reciprocatory rod 2, and secured to said bar a short distance above the bolt 7 is a U-shaped brace 9, for the purpose presently explained. The other bar 4 is provided with a hole 10 adapted to register with the hole 8 in the end of the rod 2 when the lower ends of both rods 4 are caused to embrace the upper extremity of said rod 2, and at such time the bolt 7 passes through the holes 8 and 10 and the brace 9 embraces the edges of the bars 4, 4 and rod 2 as clearly indicated at Fig. 2 while the ring 6 firmly holds the bars and rods in contact in an obvious manner.

When it is desired to uncouple the rod 2 from the mill rod 1 it is only necessary to slide the ring 6 upward a sufficient distance to permit the bars 4, 4 to spring apart as clearly illustrated at Fig. 2, which action causes the bolt 7 to be withdrawn. The brace 9 performs a double function; it serves to prevent the separation of the ring from the bars 4, 4, and being located a suitable distance from the bolt 7, stiffens the connection between the bars 4, 4 and rod 2, and serves as a guide for the bar 4 on the opposite side of the rod 2. This brace may be secured to one of the bars 4, by rivets as shown, or it may be welded thereto, or secured in any other preferred manner.

From the construction and manner of using our improved coupling, it will be readily seen that it can be economically manufactured and quickly and readily secured in place or removed, without the use of tools of any kind.

It will, of course, be understood that the metal of which the bars are made should be of such character as to cause the lower ends to spring apart when the confining ring 6 is pushed toward the upper extremities. The dimensions of the bars 4, 4 are to be such as may be desired.

Having described the construction and advantages of our improved coupling, what we claim as new and desire to secure by Letters Patent is:—

In a coupling of the character described, the combination, with a pump rod and a windmill rod, of a coupling comprising two resilient bars, the upper ends of which are bent into substantially U-shape to form a pivotal socket to receive the end of the windmill rod, said bars having their other ends

normally divergent, and one of said bars having a U-shaped guide to engage the sides of the other bar when the coupling is closed, a sliding ring surrounding said bars for holding them in connected position, and a pin for connecting said bars to the pump rod.

In testimony whereof we affix our signatures in presence of two witnesses.

FRANK S. BALLARD.
GEORGE WM. BALLARD.

Witnesses:
STELLA B. SMITH,
CHAS. F. SMITH.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."