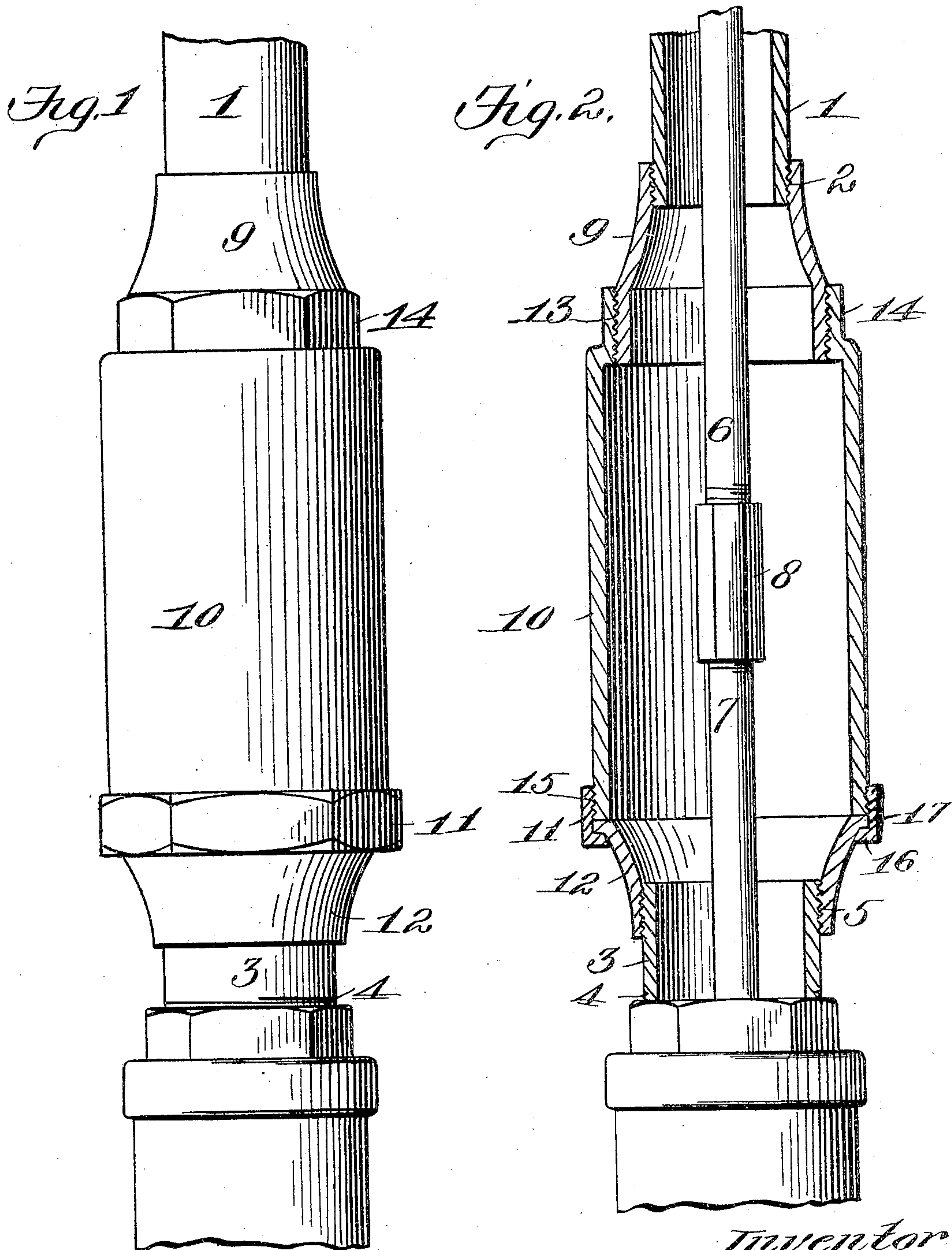


No. 797,911.

PATENTED AUG. 22, 1905.

C. H. PERRY.
ADJUSTABLE SLIP JOINT UNION.
APPLICATION FILED OCT. 21, 1904.



Witnesses
C. D. Kessler
James L. Norris, Jr.

Inventor
Charles H. Perry
By James L. Norris,
Att'y.

UNITED STATES PATENT OFFICE.

CHARLES H. PERRY, OF COCOANUTGROVE, FLORIDA.

ADJUSTABLE SLIP-JOINT UNION.

No. 797,911.

Specification of Letters Patent.

Patented Aug. 22, 1905.

Application filed October 21, 1904. Serial No. 229,449.

To all whom it may concern:

Be it known that I, CHARLES H. PERRY, a citizen of the United States, residing at Cocconutgrove, in the county of Dade and State of Florida, have invented new and useful Improvements in Adjustable Slip-Joint Unions, of which the following is a specification.

This invention relates to slip-joint unions for pipes, shafts, and machine elements more particularly adapted for use in connection with well-piping.

The invention aims particularly to construct a slip-joint union for well-piping, although the union can be used for any purpose for which it is applicable, said union enabling, when occasion requires, when used in connection with well-piping, access to a pump-rod and pump-cylinder without upsetting or removing the piping or other elements above the cylinder, thereby permitting of replacing a pump-valve or removing any obstacle which tends to retard the operation of the pump-valve or valves in a convenient manner.

The invention further aims to construct a slip-joint union for any purposes for which it is applicable, which shall be simple in construction, strong, durable, efficient in its use, and comparatively inexpensive to manufacture.

With the foregoing and other subjects in view the invention consists of the novel construction, combination, and arrangement of parts hereinafter more specifically described, and illustrated in the accompanying drawings, which form a part of this specification, and wherein I have shown the preferred embodiment of my invention in connection with a well-piping; but it is to be understood that I may make such changes, variations, and modifications therein as come properly within the scope of the claim hereunto appended.

In the drawings, wherein like reference characters denote corresponding parts throughout both views, Figure 1 is a side elevation of a slip-joint union constructed in accordance with this invention, and Fig. 2 is a vertical sectional view.

Referring to the drawings by reference characters, 1 denotes a section of a stand-pipe which is exteriorly screw-threaded, as at 2, and 3 denotes a nipple exteriorly screw-threaded, as at 4, and which is connected to the top of the pump-cylinder. (Not shown.) Although the nipple 3 is shown exteriorly screw-threaded, yet it can be interiorly screw-threaded and engage around the top of the pump-cyl-

inder. The showing of the nipple 3 is for the purpose of illustration, as the same may be a continuation of the stand-pipe and be secured to the pump-cylinder in any suitable manner. The screw-threads (indicated by the reference character 4) on the nipple are at the lower end of said nipple 3, and the said nipple 3 is further provided at its top with exterior screw-threads 5. If the slip-joint union be used in connection with other elements, the two sections which are to be connected together are provided with the screw-threads 2 and 4. As the slip-joint is shown in connection with well-pumping machinery, the pump-rod is shown and the sections thereof are indicated by the reference characters 6 7, said sections being connected by a coupling 8.

A slip-joint union constructed in accordance with this invention embodies an upper coupling member 9, a body portion 10, a coupling-band 11, and a lower coupling member 12.

The upper coupling member 9 is what is termed a "reducer" and is interiorly screw-threaded to engage the screw-threads 2, and said member 9 is substantially of truncated-cone shape and at its lower end is exteriorly screw-threaded, as at 13, which engage with the exterior screw-threads formed in the top of the body portion 10. The body portion 10 is substantially in the form of an imperforate sleeve or cylinder and at its top is somewhat reduced, is interiorly screw-threaded, as at 13, and has its periphery formed in an octagonal manner, as at 14. By such formation the portion 14 can be grasped by a wrench, so that it can be detached from the member 9. The opening in the portion 14 is such that it will enable the body portion 10 to be moved up over the member 9. The lower part of the body portion 10 is provided with exterior screw-threads 15, which are engaged by the coupling-band 11, which is interiorly screw-threaded.

The coupling-band 11, as before stated, is interiorly screw-threaded and is also provided with an inwardly-extending flange 16 for supporting the outwardly-extending flange 17, formed at the top of the lower coupling member 12. The flange 17 is adapted to be clamped between the bottom of the body portion 10 and the flange 16 of the coupling-band 11. The lower coupling member 12 is substantially of inverted-truncated-cone shape and is provided with interior screws-threads, which engage with the screw-threads 5. Said

member 12 is adapted to screw down over the nipple 3.

The function of the member 9 is to connect the body portion 10 with the pipe 1, and the function of the coupling-band 11 is to connect the member 12 with the body portion and at the same time securely connect the union in position without damaging the element above the union or below the union. The coupling-band 11 has its periphery also octagonal in contour, so that it can be readily grasped by a wrench and uncoupled. Although the part 14 of the body portion 10 is recited as being octagonal in contour and the periphery of the band 11 is set forth as octagonal in contour, yet any other suitable configuration can be employed.

The manner in which the joint is operated so as to obtain access to the part desired is as follows: It will be assumed that the joint is in position as shown in Fig. 1. The band 11 is unscrewed from the body portion 10, so that it will slip down and over the member 12, thus disconnecting the body portion from said member 12. The body portion 10 is then unscrewed from the member 9 and is slipped up and over said member 9, which will enable access to the pump-rod. The pump-rod is then uncoupled, and access can then be had to the pump-cylinder. It will be observed that it is not necessary to disconnect any elements above the member 9.

The adjustability of the union is had owing to the fact that the member 9 can have the body 10 secured thereto near the lower end or just enough to make a good joint, with this advantage—the pipes do not have to be cut to such a neat length. They can be cut about the right length, and after the member 9 has been screwed onto the pipe 1 and the member 12 screwed onto the pipe 3 the body 10 can be screwed down over the member 9 against the lower member 12. Then the band 11 can be screwed up onto the body 10 until the lower member 12 is brought against the body 10 hard enough to make a tight joint. So, therefore, it is evident that with the adjustable

slip-joint union there is no pulling or shoving of the pipes.

It is also evident that the member 12 can be threaded exteriorly, so as to do away with the pipe or nipple 3, and said member screwed into the pump-cylinder.

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

A slip-joint union, comprising a body portion consisting of an imperforate sleeve having its upper portion reduced and arranged over the enlarged portion, said enlarged portion of the same diameter throughout and having that end opposite the reduced portion provided with exterior screw-threads, said reduced portion having its outer face substantially in alinement with the inner face of the enlarged portion, of the same diameter throughout and provided with interior screw-threads, a coupling member having an exterior screw-threaded portion of the same diameter throughout and adapted to engage the interior screw-threads of the reduced portion of said sleeve, thereby connecting the sleeve and coupling member together, said coupling member having that part other than the screw-threaded portion reduced throughout, thereby enabling the sleeve to be moved over said coupling member and to further permit of the coupling member being withdrawn entirely from the said sleeve through the reduced portion thereof, a coupling member having a flange abutting against the exterior screw-threaded end of said sleeve, and a coupling-band engaging the screw-threads of said sleeve and provided with a flange adapted to engage the flange of said coupling member for connecting it to the sleeve.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

CHARLES H. PERRY.

Witnesses:

ALFRED PEACOCK,
BERNICE S. POTTER.