

No. 645,692.

Patented Mar. 20, 1900.

S. RICHARDSON.
PIPE UNION.

(Application filed Nov. 14, 1899.)

(No Model.)

Fig. 1.

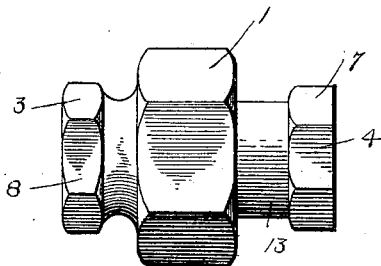


Fig. 2.

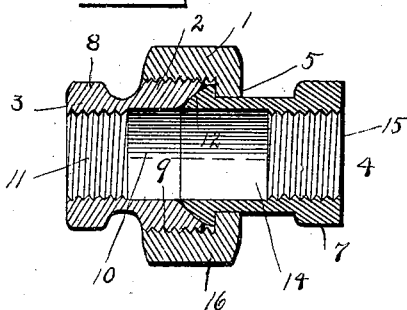


Fig. 3.

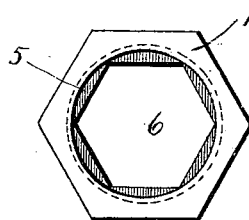
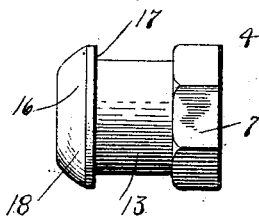


Fig. 4.



Witnesses.

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UNITED STATES PATENT OFFICE.

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PIPE-UNION.

SPECIFICATION forming part of Letters Patent No. 645,692, dated March 20, 1900.

Application filed November 14, 1899. Serial No. 736,932. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL RICHARDSON, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Pipe-Unions, of which the following is a full and complete specification, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to that class of pipe-coupling devices which are known in the trade as "unions;" and it has for its object to provide a simple and improved device of this character which will enable the convenient operation of a wrench and the independent turning of one section of the coupling for general convenience and facility in manipulation as desired.

In the drawings forming part of this specification the separate parts of my improvement are designated by the same numerals of reference in each of the views, and in which—

Figure 1 is a side view of a coupling embodying my improvements. Fig. 2 is a longitudinal sectional view. Fig. 3 is an end view of the connecting nut or body, and Fig. 4 is a side view of the independently-revoluble member.

Referring to the drawings, 1 designates the body of the coupling, which is of ordinary nut form or contour exteriorly and is provided with a threaded bore, as at 2, of sufficiently-large area or diameter to receive the opposite coupling members 3 and 4, respectively, which are carried by said central body portion 1 and project at opposite sides of the same. The bore 2 of the body 1 is intersected at one end by a surrounding flange 5, which projects inwardly and forms a hexagonal or angular opening 6, corresponding to a hexagonal or angular or exteriorly-nut-shaped flange or end 7, provided upon the portion of the independently-revoluble member 4 of the coupling, which projects from and beyond the body 1, which portion 7 is adapted to be engaged by a wrench in the independent turning of said member 4.

The member 3 has an angular or nut-shaped exterior outer end portion 8, adapted to be engaged by a wrench, and an exteriorly-threaded inner portion 9, which enters the threaded

bore 2 of the body 1 and corresponds thereto. Said member 3 has a bore 10, which is interiorly threaded, as at 11, for the reception and attachment of one of the pipe-sections which is to be coupled. The bore 10 of the member 3 is flared or enlarged at its inner end, as at 12, preferably in a concave form, for the purpose hereinafter described. The independently-rotatable member 4 of the coupling has, as hereinbefore stated, an angular or nut-shaped outer end 7 and preferably embodies a somewhat-extended stem portion 13, it being provided with a longitudinal bore 14, interiorly threaded, as at 15, for the attachment of one of the sections of pipe which is to be coupled. The member 4 is provided at its inner end with a circumferential flange or enlargement 16, which is adapted to engage the inner face of the flange 5 of the body 1 to prevent detachment of said member 4 from said body in an outward direction. Said flange 16 preferably embodies a straight inner wall 17, forming a direct bearing against the face of the flange 5, while its outer edge or face is preferably beveled in a convex manner, as shown at 18, corresponding to the flaring or enlarged end 12 of the member 3 and adapted to bear against the same.

The operation and advantages of my invention will be readily understood.

In practice the coupling member 4 can be first inserted in connection with the central body portion 1 by passing its angular end 7 through the corresponding angular opening 6, formed by the flange 5 of the body, and then inserting said member 4 up into the body 1 until its inner flange 16 comes against the inner face of the flange 5 of the body 1. The other coupling member 3 can then be screwed into the body 1 until its flared or beveled inner edge 12 bears against the beveled face 18 of the inner flange 16 of the member 4, as is clearly illustrated in Fig. 2. The pipe-sections can now be conveniently connected to the respective coupling members 3 and 4 by a simple screw connection with the respective threaded portions of the bores of said members, this operation being facilitated by reason of the fact that by simply tightening or loosening the connection between the body member 1 and the end member 3 the member

4 can be turned or revolved independently of
the body member 1 or the member 3. Con-
venient connection and manipulation is thus
enabled, and by simply turning the middle
5 body portion 1 the coupling device may be
tightened up. The angular or nut-shaped
exterior contour of all three members of the
coupling enables very convenient operation,
and it will also be noted that the separate
10 members of the coupling device proper are
capable of easy and convenient detachment
or disconnection.

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

1. A pipe-coupling, comprising a body or
middle member having an exterior angular or
nut-shaped contour and interiorly provided
with a flange projecting within its bore and
20 forming an angular or nut-shaped opening, a
connection member insertible through the
body member and having at one end an angu-
lar or nut-shaped exterior insertible through
the opening in the flange of the body and pro-
25 vided at its inner end with an exterior flange
adapted to bear against the inner face of the
body-flange, and another connection member
having a threaded engagement with the bore
of said body, and the inner end thereof being

adapted to form a continuous opening or pas- 30
sage with the other connection member.

2. A pipe-coupling, comprising a body or
middle member having an exterior angular or
nut-shaped contour and interiorly provided
with a flange projecting within its bore and 35
forming an angular or nut-shaped opening,
a connection member insertible through the
body member and having at one end an angu-
lar or nut-shaped exterior insertible through
the opening in the flange of the body and pro- 40
vided at its inner end with an exterior flange
adapted to bear against the inner face of said
body-flange and having a beveled face, and
another connection member having a thread-
ed engagement with the bore of said body and 45
provided with a flaring or beveled inner end
adapted to bear against the corresponding
face of the inner flange of the other connec-
tion member.

In testimony that I claim the foregoing as 50
my invention I have signed my name, in pres-
ence of the subscribing witnesses, this 10th
day of November, 1899.

SAMUEL RICHARDSON.

Witnesses:

F. A. STEWART,
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