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PATENTED SEPT. 12, 1905.

F. L. BENNETT.
SUCKER ROD COUPLING.
APPLICATION FILED JAN. 14, 1905.

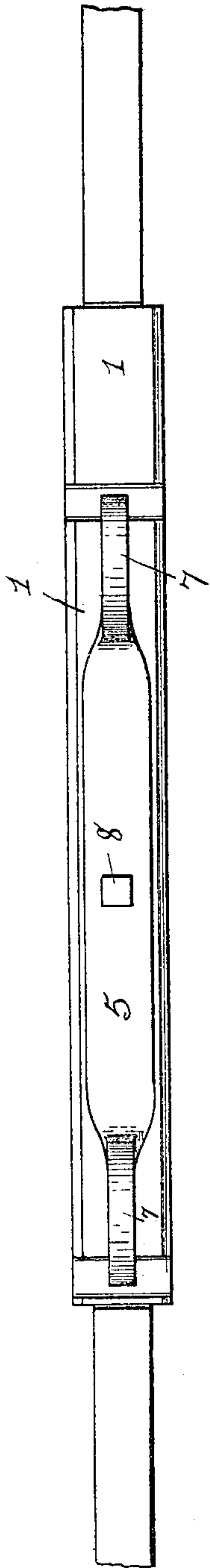


Fig. 1

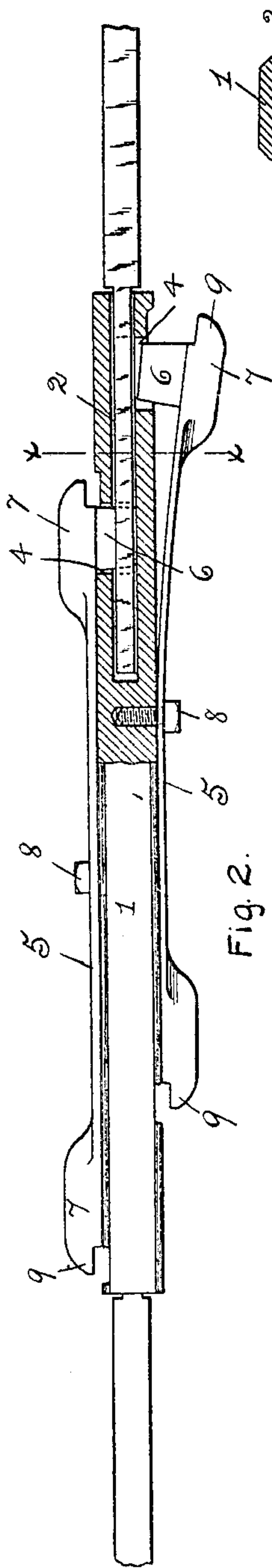


Fig. 2.

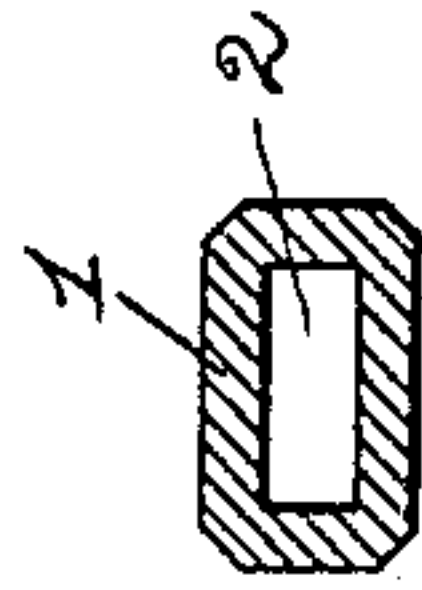


Fig. 6.

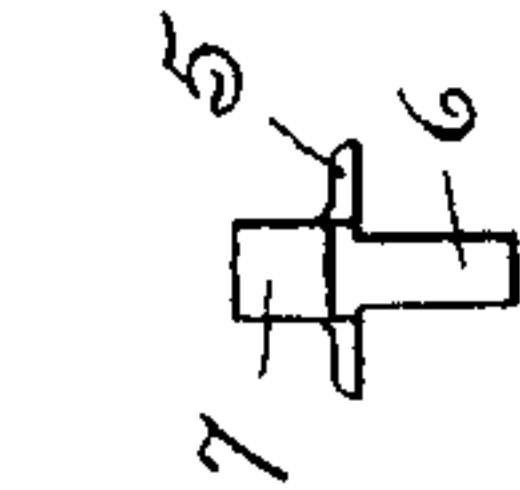


Fig. 7.

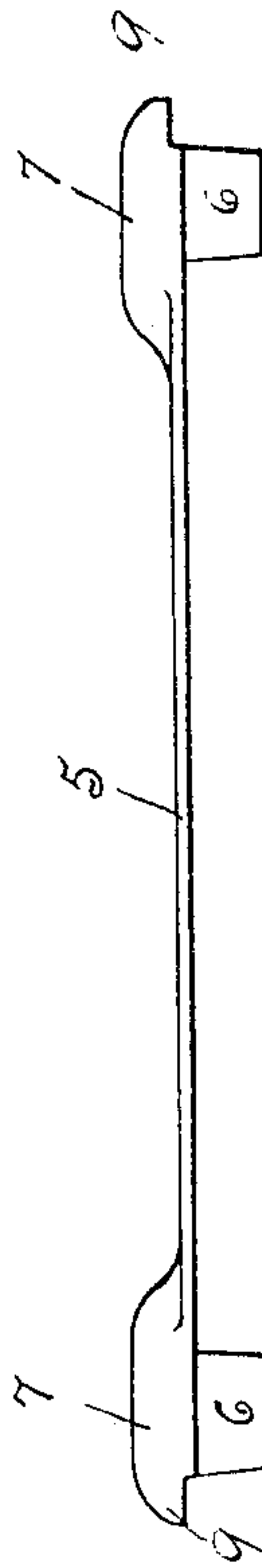


Fig. 3.



Fig. 4



Fig. 5

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UNITED STATES PATENT OFFICE.

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SUCKER-ROD COUPLING.

No. 799,296.

Specification of Letters Patent.

Patented Sept. 12, 1905.

Application filed January 14, 1905. Serial No. 241,000.

To all whom it may concern:

Be it known that I, FRANCIS L. BENNETT, a citizen of the United States, and a resident of Toledo, in the county of Lucas and State of Ohio, have invented certain new and useful Improvements in Sucker-Rod Couplings; and I 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, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention relates to the class of couplings employed for connecting or uniting the contiguous ends of sucker-rods and the like together and which are capable of being disjoined from one or both of the connected rods.

The object of my invention is the provision of a single-piece coupling member that is simple and efficient in its construction and operation and capable of being easily and quickly connected to or disconnected from the contiguous ends of the pair of rods to be coupled and that is devoid of all coupling-threads commonly used in articles of this class.

The invention is fully described in the following specification and shown in the accompanying drawings, in which—

Figure 1 is a plan view of my improved coupling. Fig. 2 is a side view thereof with part in longitudinal vertical section. Fig. 3 is a side elevation of the spring locking-pins. Figs. 4 and 5 are plan and side views, respectively, of a form of rod having its ends adapted for engagement with my coupling member. Fig. 6 is a cross-section of the coupling member taken on the dotted line *x x* in Fig. 2, and Fig. 7 is an end view of the spring locking-pins shown in Fig. 3.

Referring to the drawings, 1 represents the elongated holder or body portion of the coupling member of my invention, which is provided at each of its ends with a longitudinally-extending axially-disposed bore or socket 2 for receiving one of the ends of a rod 3. These sockets are each provided with two lateral openings 4, which are formed in the opposing walls thereof and spaced a short distance apart longitudinally of the holder 1, as shown in Fig. 2.

A spring rod-locking member 5 is secured to each side of the holder 1, in which the

openings 4 are formed, and is provided at each end with a laterally-extending tongue 6, adapted to project through the contiguous opening in said holder 1 and within the socket 2, and also with a laterally-broadened portion 7, adapted to form a gripping-surface to facilitate the withdrawal of the associated tongue from its receiving-opening when it is desired to disengage or connect a pair of rods. Each of the locking members 5 is secured to the holder 1 by means of a screw 8 being passed centrally therethrough and threaded within an aperture provided in the side of the holder, thus permitting the ends of said members to be sprung outwardly for the purpose of withdrawing the tongues 6 from within the sockets 2. As the locking members 5 are formed of spring metal, their normal tendency is to hug the sides of the holder 1 throughout their length and to retain the tongues 6, projecting within the sockets 2. Should the spring tension of the members 5 be too strong to permit the easy withdrawal of the tongues 6 from their receiving-sockets, a lip 9 may be formed at the outer end of each of the raised or broadened portions 7 and spaced a short distance from the face of the holder 1 to form a notch in which one of the jaws of an expanding tool may be inserted, the other jaw being positioned to engage the lip 9 on the contiguous end of the opposing locking member.

The rods 3, which my invention is adapted to connect, may be of any suitable length, shape, or style and are formed at each end with a portion 10, shaped to be inserted within the sockets 2 of the holders 1 of the coupling member, as shown in Figs. 1 and 2. Two apertures or depressions 11 are formed in each of the portions 10 of the rods 3 in position to aline with the openings 4 in the member 1 when the ends of the rods are inserted within the sockets 2 of the holder, thereby enabling the ends of the tongues 6 on the locking members 5 to project within said apertures or depressions 11 in the ends of the rods 3 and lock them against withdrawal from the sockets 2.

It will be apparent that a very strong and efficient joint is formed between the end of a rod 3 and a coupling member by reason of the engagement of two tongues 6 with the rod, thereby necessitating either the lateral withdrawal or the breaking of both tongues before a rod can be withdrawn from a socket. As the size of a coupling member is usually

substantially that of the diameter of a well-casing into which it is to be lowered, a spreading of the tongues 6 from any cause and the consequent disconnecting of the rods during their lowering operation is prevented by reason of the enlarged ends of the locking members 5 engaging and having their lateral movement limited by the well-casing.

From the above description it will be seen that the contiguous ends of two sucker-rods or the like may be easily and quickly connected or disconnected by the use of my improved coupling member and when so connected form a strong and rigid joint.

It is obvious that such changes in the form, proportion, and minor details of construction of the parts as fairly fall within the scope of my invention may be made without departing from the spirit or sacrificing any of the advantages thereof.

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

1. A coupling of the class described, comprising a holder having an axially-disposed socket in each end thereof and openings communicating transversely with said sockets, and a plurality of tongues mounted on said holder, one projecting within each of said transverse openings and adapted to lock an object inserted within said sockets against movement.

2. In a coupling for sucker-rods and the like, the combination of a holder having axially-disposed sockets in each end and an opening communicating with each socket through the wall thereof, a locking-tongue disposed within each of said openings, and having its inner end normally projecting within the associated socket, and two rods having their contiguous ends shaped to be received by the sockets in said holder and provided with apertures positioned to register with and receive said tongues when the rods are inserted within the sockets.

3. The combination with a pair of rods having their ends provided with one or more transverse apertures, of a coupling member having each end formed with a longitudinally-disposed socket shaped to receive the apertured ends of said rods, said sockets having their walls formed with openings positioned to register with the apertures in the rod ends, and means secured to said coupling member and movably projecting through the openings in the walls of said sockets for locking within the apertures in the rod ends and preventing withdrawal thereof from their respective sockets.

4. In combination, a coupling member having a socket formed longitudinally in each end thereof and one or more openings through the walls of the sockets, a pair of rods each having an end shaped to fit within the opposing sockets in said member and apertures formed therein to aline with the openings in the walls of the sockets, and means carried by said coupling member and operative within the openings in said sockets and in the apertures in said rod ends to lock said rods against independent movement.

5. A coupling member having its ends bored to receive the contiguous ends of a pair of rods to be coupled and transverse openings provided in the walls of the bored portions thereof, and resilient locking means secured to said coupling member and provided with laterally-projecting tongues for extending within said openings and engaging alining apertures or depressions formed in the inserted ends of the rods, whereby independent movement of said rods is normally prevented.

6. A coupling member having its ends longitudinally bored to receive the contiguous ends of a pair of rods to be coupled; said bored portions each having longitudinally-spaced oppositely-disposed openings provided through its walls, and a locking member centrally secured to each side of said coupling member in which said openings are provided and having resilient end portions each formed with a tongue and adapted to project within the contiguous opening in said coupling member and engage and prevent independent longitudinal movement of the respective rods, and also provided with gripping means whereby the tongues may be withdrawn from engagement with a rod.

7. A coupling member having its ends longitudinally bored to receive the contiguous ends of a pair of rods to be coupled, said bored portions each having longitudinally-spaced oppositely-disposed openings provided through its walls, and a member secured to each side of said coupling member with said openings and having resilient end portions provided with tongues adapted to project within said openings and normally engage and lock the respective rods against independent movement.

In testimony whereof I have hereunto signed my name to this specification in the presence of two subscribing witnesses.

FRANCIS L. BENNETT

Witnesses:

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