E. S. FOSTER.

HOSE COUPLING.

APPLICATION FILED APR. 12, 1916.

1,325,468.

Patented Dec. 16, 1919.

Fig. 1.

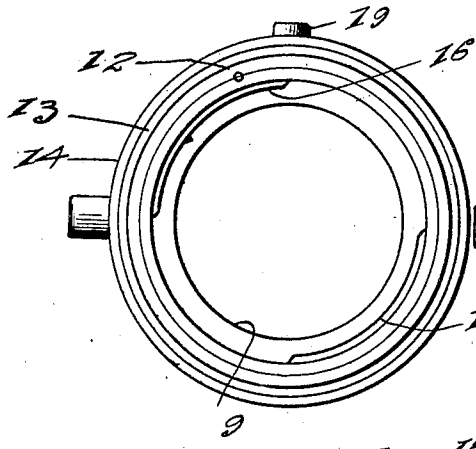
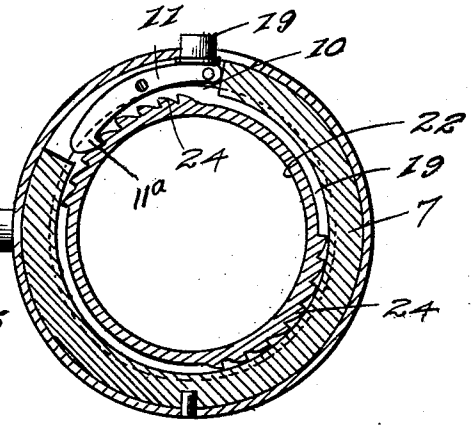


Fig. 3.



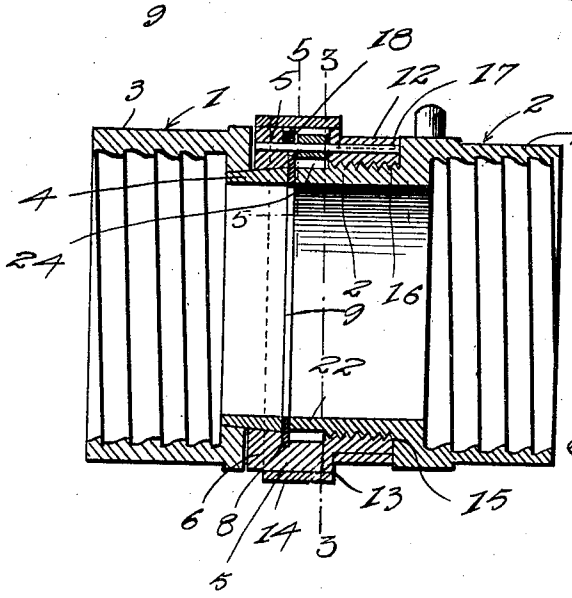


Fig. 2.

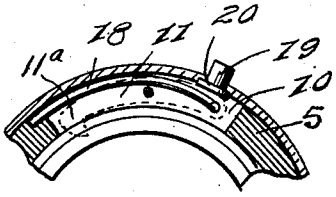
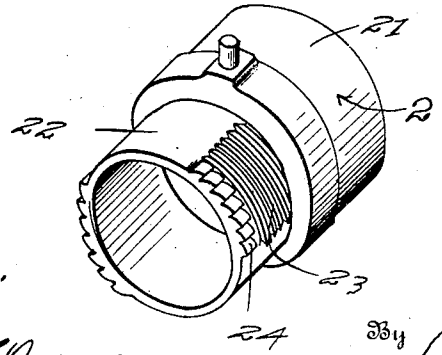


Fig. 5.

Fig. 4.



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HOSE-COUPLING.

1,325,468. Specification of Letters Patent. Patented Dec. 16, 1919.

Application filed April 12, 1916. Serial No. 90,643.

To all whom it may concern:

Be it known that I, EDWIN S. FOSTER, a citizen of the United States, residing at Caspar, in the county of Mendocino, and State of California, have invented certain new and useful Improvements in Hose-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.

The primary object of this invention is to permit of the companion sections of a fire hose coupling being conveniently and expeditiously connected and disconnected by hand to prevent leakage when same are connected and also to prevent the members from becoming accidentally uncoupled.

Another object of the invention is to provide a novel type of locking means for holding the sections in coupled position, and which can be operated by hand and will effectively hold the members in coupled position when the members are not coupled to a maximum degree.

Other objects will appear and be better understood from that embodiment of my invention of which the following is the specification, reference being had to the accompanying drawings, forming a part thereof, in which:

Figure 1 is an end view of the female member of the coupling,

Fig. 2 is a longitudinal sectional view of the members in coupled relation,

Fig. 3 is a transverse sectional view taken on the line 3—3 of Fig. 2,

Fig. 4 is a perspective view of the male member of the coupling,

Fig. 5 is a sectional view on the line 5—5 of Fig. 2.

Referring to the drawings in detail, the numeral 1 designates a female member of a coupling and 2 the male member. The female member comprises a cylindrical body 3 having at one end, a reduced extension 4. A ring 5 has an annular flange 6, which receives and which is secured to the extension 4. The ring 5 extends forwardly beyond the extension 4, and the forward edge of the extension 4 and the adjacent face of the flange 6 forming an internal seat 8 for the reception of a washer 9. The ring or shoulder is provided with a recess 10 for the reception of a locking dog 11. A ring 15 engages the forward edge of the ring 5 and has an annular flange 13, which has its peripheral edge lying flush with the peripheral edge of the ring 5. A ring 14 encircles the ring 5 and the flange 13 and secures the ring 15 in place. The ring 15 has secured to its outer side a ring 12, and at its inner side it is provided with mutilated thread 16. A pin 17 pivotally secures the dog 11 in the recess 10. A spring 18 is located behind the dog 11 and has one end suitably connected to the side wall of the recess 10 of the ring and its opposite end bent laterally and extended through an opening in the rear end of the dog 11. A push button 19 is slidably mounted within the opening formed in the rings 5 and 14 and has its inner end provided with a flange 20, which prevents the accidental displacement of the push button.

The inner end of the dog 11 engages one end of the spring and the other end of the dog is provided with a tooth 11^a.

The male member of the coupling has a cylindrical body 21 having one end provided with a reduced extension 22, adapted to be fitted into the ring 15 of the female member, and is provided with a mutilated thread 23 for engagement with the thread 16 on the ring 15. The extension 22 is provided with a series of spaced teeth 24, which are located beyond the threaded portion of the extension and one of the series of teeth are adapted to be engaged by the tooth 11^a of the dog when the members are in coupled position. The top of the extension 22 is constructed so that it does not require that the threads of the male member be fully engaged with the threads of the female member to permit the dog to engage one of the teeth of the male member.

When coupling the members 1 and 2, the extension 22 is first inserted into the ring 15 and then turned to interlock the threads 16 and 23. The dog 11 engages one of the teeth 24 and holds the members against accidental rotation. When it is desired to uncouple the members, the push button 19 is pressed so as to withdraw the tooth 11^a of the dog 11 from engagement with the teeth 24 and the member 2 is turned with the other hand so as to withdraw the threads from engagement with each other after which the members may be separated by exerting an axial pull thereon. If it is desired to couple the members to a degree whereby they cannot be uncoupled except by means of a wrench, the

member 2 is screwed inwardly until its threads engage all of the threads on the female member and the inner end of the male member engages the washer 9.

Inasmuch as in this coupling the ends to be coupled are not inserted within each other, but only abut with their reduced portions of substantially equal inner diameter, the accumulation of dirt or deposits at the ends to be coupled cannot interfere with the quickness and security of the coupling. In case of emergency the surrounding coupling sleeve which with its flanged end surrounds one of the members while the detachable extension 12, 15 surrounds the other member, is easily and quickly assembled, and secured in place by the ready engagement with the said coupling members, and by means of the surrounding sleeve 14. This construction in parts moreover, makes it easy to remove any accumulated dirt from within the coupling sleeve, so as not to interfere with the immediate utilization of the device in case of emergency. The fact that the device is securely lodged within the recess formed by the reduced portions 4, 22, so as not to present any substantial projection beyond the circumference of the parts to be coupled, adds to its utility, and prevents its being accidentally uncoupled by severe handling. The pivot 17 of the coupling dog 11, as shown in the drawing, in the preferred embodiment of the invention herewith submitted, extends through both the flange 6 of the recessed ring 5, as well as through the annular extension 15 thus acting as a brace and adding to the utility and safety of the device.

Having thus described my invention, what I claim as new is:—

A hose coupling comprising hose engaging sleeves having reduced and meeting ends, the reduced end of one sleeve having its inner end portion externally threaded and having radially extending ratchet teeth positioned adjacent its outer end, a collar rotatably mounted upon the reduced end of the second sleeve and extending to inclose the reduced end of the first sleeve and provided with internal threads for engaging the external threads of the first sleeve, the collar being provided with an internal annular depression forming a pocket for receiving the ratchet teeth and extended for a portion of the circumference of the collar to provide a pawl housing having an opening at one end extending through the side of the collar, a pawl pivotally mounted in the pawl housing for engaging the ratchet teeth and having an actuating pin extending through the opening in the end of the pawl housing, and a gasket positioned in the annular recess and extending between the adjacent reduced ends of the sleeves.

In testimony whereof I affix my signature in presence of two witnesses.

EDWIN S. FOSTER.

Witnesses:

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