A. B. MAGNUSON.

HOSE COUPLING.

APPLICATION FILED JULY 19, 1911.

1,020,615. Patented Mar. 19, 1912.

FIG. 1.

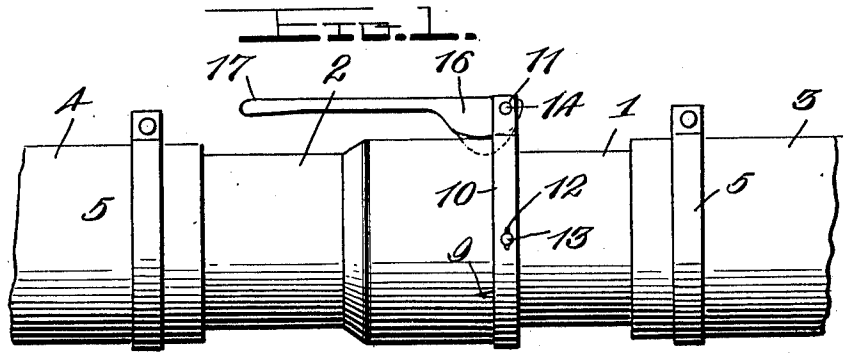


FIG. 2.

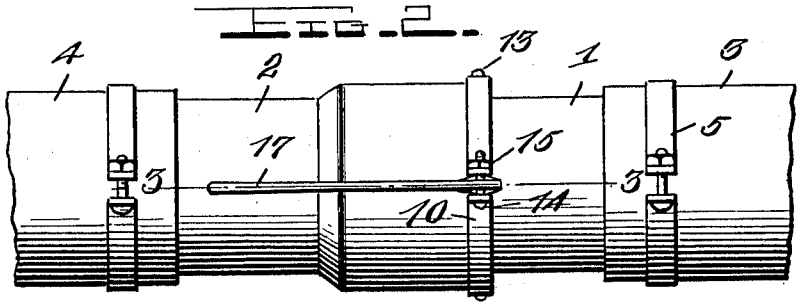


FIG. 3.

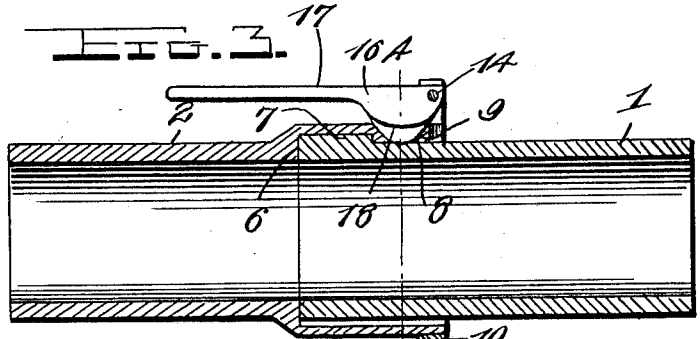
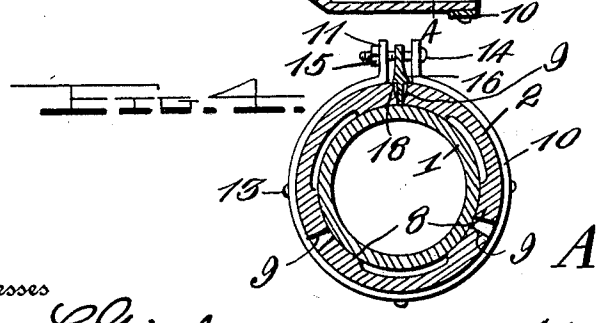


FIG. 4.



Witnesses

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HOSE-COUPLING.

1,020,615. Specification of Letters Patent. Patented Mar. 19, 1912.

Application filed July 19, 1911. Serial No. 639,301.

To all whom it may concern:

Be it known that I, AXEL B. MAGNUSON, a citizen of the United States, residing at Cambridge, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Hose-Couplings, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to new and useful improvements in hose couplings, and my object is to provide a device of this character which may be quickly, easily and effectively applied to use.

A further object of the invention resides in providing a hose coupling formed in sections, one section of which is adapted to fit within the other, and both of said sections being provided with interlocking devices.

A further object of the invention resides in providing a female section with lugs on its inner periphery, while the male section is provided with lugs on its outer periphery, which are adapted to be interlocked with one another, and a still further object resides in forming the female section of spring metal.

Another object of the invention resides in providing a clamping means to cause the female section to bind tightly against the male section to prevent rotative movement of the latter.

A still further object of the invention resides in providing a device which is extremely simple in construction, and one which may be readily and cheaply manufactured.

With these and other objects in view, my invention consists in the novel features of construction, combination and arrangement of parts as will be hereinafter referred to and more particularly pointed out in the specification and claims.

In the accompanying drawing forming a part of this application, Figure 1 is a fragmentary side elevation showing my improved device applied to use. Fig. 2 is a top plan view thereof. Fig. 3 is a longitudinal section as seen on line 3—3, Fig. 2, and, Fig. 4 is a transverse section as seen on line 4—4, Fig. 3.

In carrying out my invention, I shall refer to the drawings in which similar reference characters designate corresponding parts throughout the several views and in which 1 and 2 indicate, respectively, the male and female sections of my improved hose coupling, which sections are, respectively, engaged with the sections 3 and 4 of a hose, by means of the usual or any preferred form of clamp 5. The section 2 is of greater diameter at its free end than the free end of the section 1, and said section 2 is reduced on its inner diameter a short distance beyond its free end, to form an annular shoulder 6 which is adapted to receive in engagement therewith, the extreme free end of the section 1 when the latter is telescoped within said section 2.

The outer periphery of the male section 1 is provided adjacent its free end with the peripheral or arcuately designed lugs or locking members 7 which are spaced at regular intervals therearound, and the section 2 is provided on its inner periphery adjacent its free end with similar lugs or locking members 8, the latter being substantially the same size and spaced at the same interval as the lugs 7, and in telescoping the two sections of the coupling, the lugs 7 are entered in the spaces between the lugs 8 and the section 1 forced inwardly until the free or outer end thereof rests against the annular shoulder 6 within said section 2. At this point, the inner side edges of said locking lugs 7 will be disposed beyond the inner side edges of the locking lugs 8 of the opposed section, whereupon the sections may be given a slight twist or turn in opposite directions, which will dispose the opposed locking lugs immediately behind one another to prevent the sections from being separated, and when so locked in engagement with one another, water may flow through the same without possible chance of leakage, as the diameter of the reduced portion of the section 2 is substantially equal to the inner diameter of the section 1, and the free end of said section 1 is snugly in engagement with the annular shoulder 6 of said section 2. These locking lugs which have heretofore been described, will prevent the sections of the coupling from separating without first rotating the same so that the lugs on each section register with the spaces in the other, and in order to prevent any casual rotative movement of the sections, while the same is in use, I prefer to have the sections formed of spring metal and the free end of the section 2 provided with a plurality of slots 9. Also secured about centrally of its length to the outer periphery of the section 2 adjacent its free end, is a clamping ring or band 10,

the free ends of said clamping ring being extended upwardly or laterally thereof, as shown at 11, and said band is also provided intermediate of its ends and the point at which the same is secured to the section 2, with the slots or channels 12 which receive therethrough, the registering pins 13 carried on the outer periphery of said section 2. The laterally extending free ends 11 of said clamping ring have a pin or bolt 14 extending therethrough, the free end of which is threaded and has engaged therewith, a nut 15, whereby the distance between said laterally extending ends may be adjusted to correspondingly adjust the diameter of the free end of said section 1, and pivotally carried on said pin 14, is a cam 16 having a handle portion or the like 17 formed thereon. After the two sections of the coupling have been telescoped and locked in engagement with one another by being turned so that the lugs 7 and 8 are interlocked, the cam 16 may be forced downwardly into engagement with the outer periphery of the section 1 by being passed through one of the slots 9 in section 2 which will cause the clamping ring or band 10 to clamp around the free end of said section 2 and in turn cause the latter to bind tightly about the periphery of said section 1, thereby preventing any casual rotation of the two sections of the coupling while the same are in use.

Thus, it will be seen that in applying the device to use, the section 1 is brought toward the section 2 until the lugs 7 of the former register with the spaces between the lugs 8 of the latter, whereby said section 1 is inserted within the other section until the free end thereof engages the annular shoulder 6, whereupon a turn of the sections will cause said lugs to interlock. The cam lever 16 may then be forced downwardly and the two sections clamped together tightly, which action, it will be seen, will be quickly, easily and effectively accomplished.

From the foregoing, it will be seen that I have provided a simple hose coupling formed in sections, the sections of which, when clamped together in the manner heretofore described, will be held in such position until the time when the same are manually released from one another, and it will be seen that they will fit within one another so snugly as to prevent any leakage, whatsoever. It will further be seen that the rotation of the sections or members of the coupling is practically impossible when the clamping ring has been forced into effective position, and it will still further be seen that in view of the slots in the female member to receive the cam when it is moved into effective position, the same is not adapted to be casually disengaged. Furthermore, it will be seen that my device is of simple and durable construction, and one which may be readily and cheaply manufactured.

Although I have specifically described the various features of my device, it will be readily understood that various changes in form, proportion and in the minor details of construction may be resorted to without departing from the spirit or sacrificing any of the principles of the invention.

It has been stated that in effectively positioning the cam 16, the same is adapted to extend through a slot 9 in the female member 2 to engage the outer periphery of the male member 1, and said cam member is also provided with shoulders 18 disposed on opposite faces of the same, which shoulders engage the outer periphery of the female member 2 when said cam is disposed in its effective position so as to prevent the same from casual displacement.

What I claim is:—

1. A hose coupling of the class described, comprising a male and a female section, said female section having its free end provided with a plurality of slots, interlocking means between said sections, a clamping ring secured intermediate of its ends to said female section, and a cam pivotally carried between the ends of said clamping ring and adapted to be forced through one of the slots of said female section and into engagement with the male section, whereby said female section will be tightly clamped around said male section.

2. A hose coupling of the class described, comprising a male and a female section, the free end of said female section being slotted, interlocking means between said sections, a clamping ring secured on said female section, a cam pivotally carried between the ends of said clamping ring and adapted to be forced through one slot of said female section and into engagement with said male section, and means on the cam to prevent the casual displacement of the same when effectively positioned.

3. A coupling of the class described, comprising a male and a female section, the free end of said female section being slotted, interlocking means between said sections to prevent longitudinal separation thereof, a clamping ring carried on said female section, a cam pivotally carried between the ends of said clamping ring and adapted to be forced through a slot in said female section into engagement with the outer periphery of the male section, and shoulders formed on the faces of said cam for engagement with the outer periphery of said female section when said cam is moved to its effective position.

4. A hose coupling of the class described, comprising a male and a female section, the female section having its free end slotted, interlocking means between said sections, a

clamping ring secured midway of its ends to said female section, said ring being provided with slots intermediate of its ends and securing point, pins carried on said female section extending through said slots, and a cam lever pivotally mounted between the free ends of said ring and adapted to be forced into engagement with the male section to clamp the female section tightly around said male section.

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

AXEL B. MAGNUSON.

Witnesses:

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