(No Model.)

T. A. OUTHOUSE & A. E. BOHLEN.

HOSE COUPLING.

No. 557,423. Patented Mar. 31, 1896.

Fig. 1,

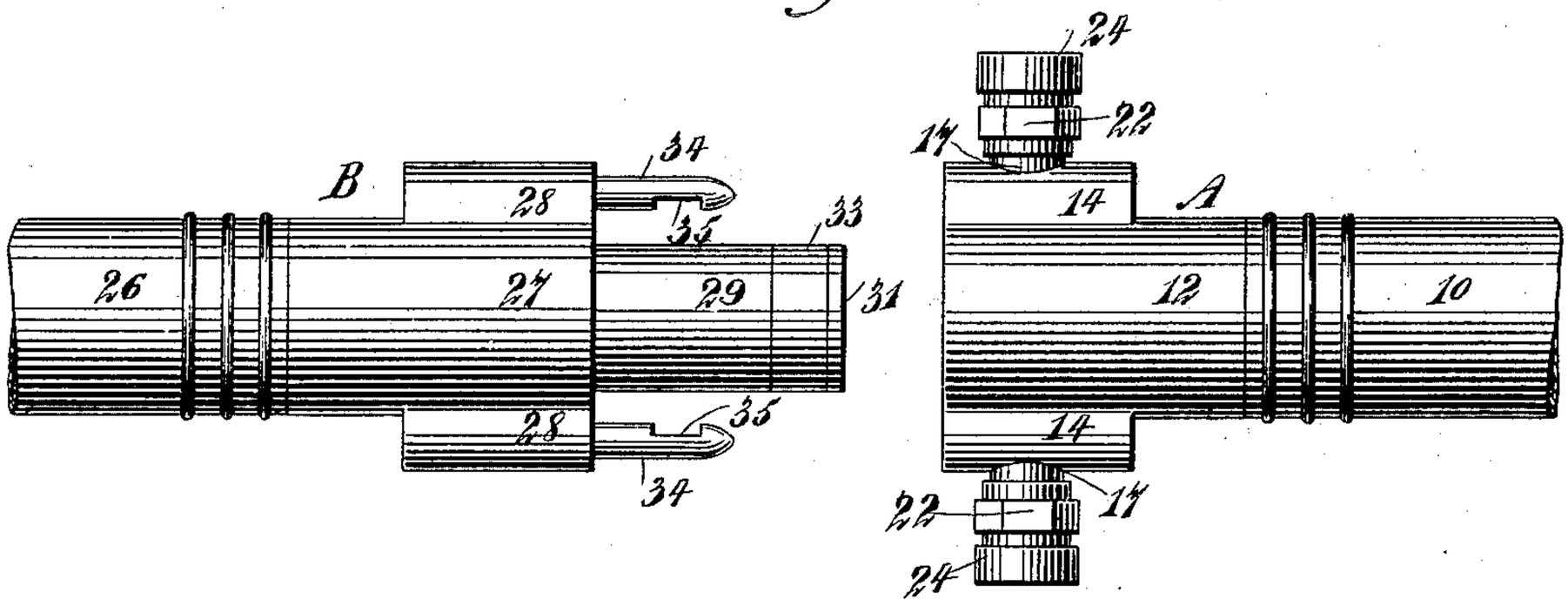


Fig. 2,

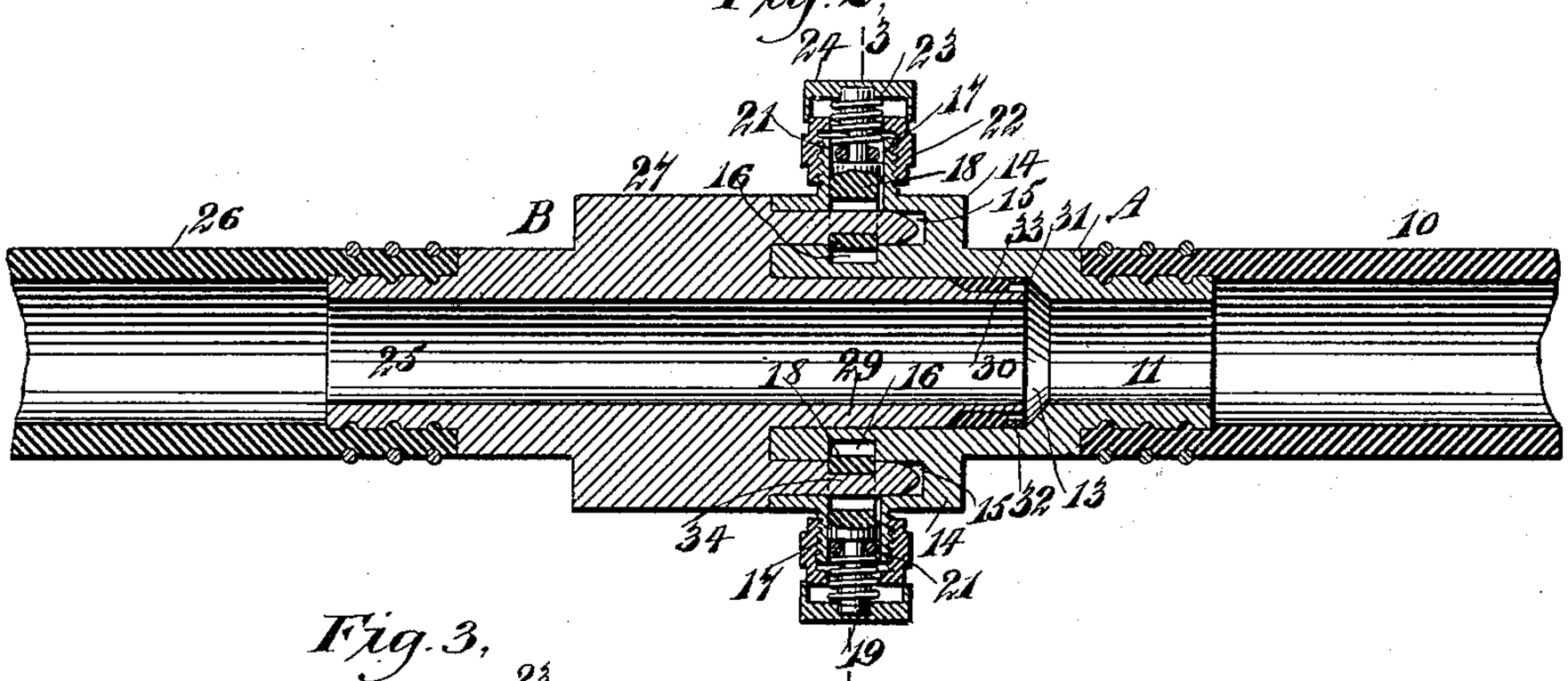


Fig. 3,

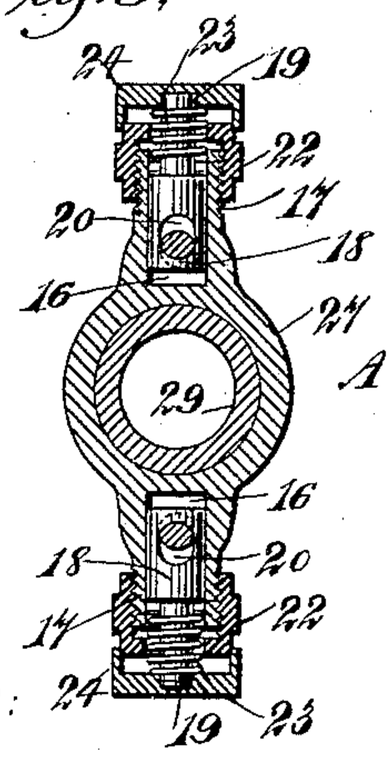
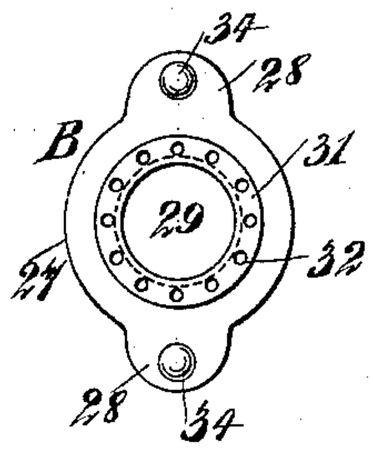


Fig. 4.



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UNITED STATES PATENT OFFICE.

THOMAS ALEXANDER OUTHOUSE AND ALBERT ELDE BOHLEN, OF MOUNT OLIVE, ILLINOIS.

HOSE-COUPLING.

SPECIFICATION forming part of Letters Patent No. 557,423, dated March 31, 1896.

Application filed December 3, 1895. Serial No. 570,923. (No model.)

To all whom it may concern:

Be it known that we, THOMAS ALEXANDER OUTHOUSE and ALBERT ELDE BOHLEN, of Mount Olive, in the county of Macoupin and State of Illinois, have invented a new and Improved Hose-Coupling, of which the following is a full, clear, and exact description.

Our invention relates to an improvement in what are known as "automatic" hose-couplers, the coupling being so constructed that when the sections are brought in proper contact they will be automatically locked.

The object of the invention is to provide a hose-coupling that can be expeditiously and conveniently coupled and as readily and quickly uncoupled, even while the pressure remains on the hose.

A further object of the invention is to provide a coupling which will be exceedingly simple and durable and economic in its general construction.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of the two sections of the coupling uncoupled. Fig. 2 is a longitudinal section through the parts of the coupling in coupled position. Fig. 3 is a section taken through the coupled sections and practically on the line 3 3 of Fig. 2, and Fig. 4 is a front elevation of the main section of the coupler.

The coupling comprises, as usual, a female section A and a male section B. The female section consists of a shank 11, to which the hose 10 is clamped in any suitable or approved manner, and a body or head 12. Where the body of the female section connects with its shank an interior shoulder 13 is formed, the said shoulder being preferably beveled, as shown in Fig. 2, the contracted portion of the shoulder being at the inner termination of the shank, and the bore in the head portion of the female section is of even diameter throughout to the larger diameter of the aforesaid shoulder 13.

An offset or extension 14 is formed longitudinally at each side of the outer face of the head portion 12 of the female coupler-section, and each offset or extension is provided with a longitudinal bore 15, which extends from the front face of the extension to a point near the back, the front faces of the extensions being flush with the front face of the body of the female section.

Within each of the offsets or extensions 14 an annular chamber 16 is made by diametrically recessing the interior wall, and the chambers 16 within the offsets or extensions are of greater diameter than the diameter of the bores 15. Each chamber is carried through the side wall of the extension or offset in which it is made and is surrounded by an exteriorly-threaded collar or thimble 17. A latch 18 has sliding movement in each chamber 16 of the offsets 14, and each latch is provided with a shank 19, integral with or attached to its outer end. Each latch is provided with an opening 20 extending through from front to rear, and these openings 20 in the latches are adapted to coincide in a measure with the bores in the offsets or extensions, and the said openings 20 are of greater diameter than the aforesaid bores.

The outward movement of the latches is limited by passing tie-rods 21 through the collars or thimbles 17 and over the outer end surface of the apertured portions of the latches, as shown best in Fig. 2. A nut 22 is screwed upon each collar or thimble 17, and a spring 23 is coiled around the shank of each latch, being made to rest either upon the tie-rods 21, or the lower ends of the springs are secured to the outer end portions of the collars or thimbles 17 by means of flanges formed upon the outer end surfaces of the nuts 22.

The outer end surface of each latch-shank is provided with a cap 24, the said caps being of sufficient diameter to slide over the nuts 22 a predetermined distance, and the outer ends of the springs 23 have bearing against the inner faces of the said caps, and the caps may be screwed inward on the latch-shanks

until they engage with offsets on the nuts 22. When the caps, however, are removed from the offsets on the nuts, which position is their normal one, the springs 23 will act to carry the bottom portions of the latches upward within the chambers 16 a sufficient distance to cause a portion of each latch to interrupt the bore 15, in which it is placed in a longitudinal direction, as shown in Fig. 2.

The male section B of the coupling comprises a shank 25, to which the hose 26 is secured, and a body or head section 27, the latter being provided with exterior offsets or extensions 28 at its sides, corresponding in location to the offsets 14 of the female section. The male section is provided with a central tubular tongue 29, which projects outwardly in a horizontal plane beyond the front of the body or head 27, and the exterior diameter of the tubular tongue 29 is such as to permit it to enter and closely fit in the bore of the head portion of the female section A. Near the end of the tubular tongue 29 an annular recess 30 is made in its exterior surface, and the inner end wall of this recess is given a rearward inclination, as shown in Fig. 2. The recess 30 produces a flange 31 at the extreme outer end of the tubular tongue, and in this flange a number of openings or apertures 32 are made, extending through into the recess 30. The recess 30 is adapted to receive a washer 33, which has bearing against the inner face of the flange 31, and the rear portion of the washer is beveled practically to correspond to the beveled end of the aforesaid recess 30.

A stud 34 is securely fastened in the forward end of each extension 28 of the main section of the coupler, and the length of the studs and their diameter are such that the said studs will readily enter the bores 15 in the offsets or extensions of the female section A. In the inner side of each post or stud 34 a recess 35 is produced, and the outer end of each post is preferably pointed or rendered somewhat conical.

In effecting a coupling of the two sections the tongue 29 of the male section is made to enter the body of the female section, and the studs of the male section will thereupon enter the bores in the offsets of the female section, and when the head portions of the two sections are brought together, as shown in Fig. 2, the latches 18, which will have been depressed by the posts passing through their apertures 20 when the recesses 35 of the posts register with the apertured portions of the latches, will be carried outward by the springs 23 to such an extent that the inner portions of the latches will enter and fill the recesses in the posts, thus securely locking the two sections together.

When the coupling is completed, the flanged end of the tongue 29 will rest against the enlarged portion of the shoulder 13 in the interior of the female section, and as soon as the water is turned on it will therefore be permitted to enter the apertures 32 in the said flange 31 and crowd the washer 33 up firmly against the inner wall of the female section, thereby effectually preventing the possibility of a leak.

To effect an uncoupling, all that is necessary is to press inward upon the two caps 24, whereupon the latches 18 will be released from engagement with the studs 34, and the two sections may be readily separated. After a coupling has been made the nuts 22 will be screwed outward until their projections engage with the caps, thereby preventing the caps being pressed inward to effect an uncoupling until such action is desired.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. In a hose-coupling, a female section provided with spring-controlled latches exteriorly operated and bores in which the said latches have movement, and a male section provided with keeper-studs adapted to enter the said bores and be engaged by the said latches, and a tubular tongue adapted to enter and be contained in the water-chamber of the female section of the coupling, as and for the purpose specified.

2. In a hose-coupling, a female section provided with exteriorly-operated latches and bores leading to the said latches, also locking devices for the latches, and a male section having keeper-studs adapted to enter the said bores and to be engaged by the said latches, and a tubular tongue adapted to enter and to be contained within the water-receiving chamber of the female section, whereby a through waterway is provided between both sections of the coupler when in coupled position, as and for the purpose specified.

3. A hose-coupling, comprising two sections, one of which is provided with two bores and a water-receiving chamber, and the other of which is provided with lugs to enter the bores of the first-named section and with a tubular tongue to enter the water-receiving chamber of the first-named section, and latches carried on the first-named section in position to engage the lugs when in place in the bores, said latches being held normally in position to engage said lugs and being arranged when pressed inwardly to release the lugs, substantially as set forth.

4. A hose-coupling, comprising two sections, one of which is provided with bores and with a water-receiving chamber, and the other of which is provided with recessed lugs to enter the bores, and a tubular tongue to enter the water-receiving chamber of the first-named section, and latches carried on the first-named section and movable transversely across the bores thereof, said latches being provided with openings for the passage of the lugs on the last-named section, and being provided with means for normally hold-

ing them in engagement with the recesses in said lugs, substantially as set forth.

5. A hose-coupling, comprising two sections, one of which is provided with bores and with a water-receiving chamber, and the other of which is provided with recessed lugs, to enter the bores and with a tubular tongue to enter the water-receiving chamber of the first-named section, latches carried on the first-named section and movable transversely across the bores therein, said latches having their ends arranged to project outside the walls of the section in position to be engaged by the hands, and being apertured to permit the passage through them of the lugs on the last-named section, and springs arranged to hold said latches normally in engagement with the recesses in the lugs, substantially as set forth.

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