J. E. W. BOESCH.

HOSE COUPLING.

APPLICATION FILED MAY 24, 1910.

983,671.

Patented Feb. 7, 1911.

2 SHEETS—SHEET 1.

Fig. 1.

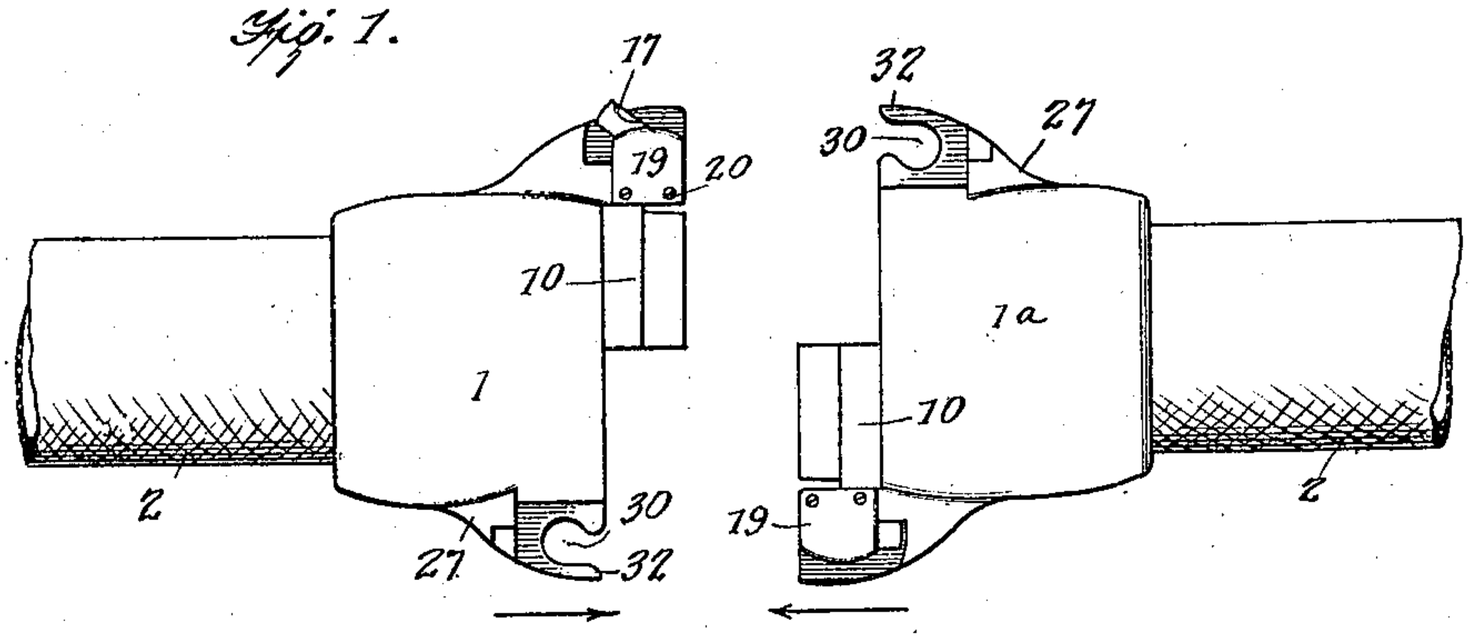


Fig. 2.

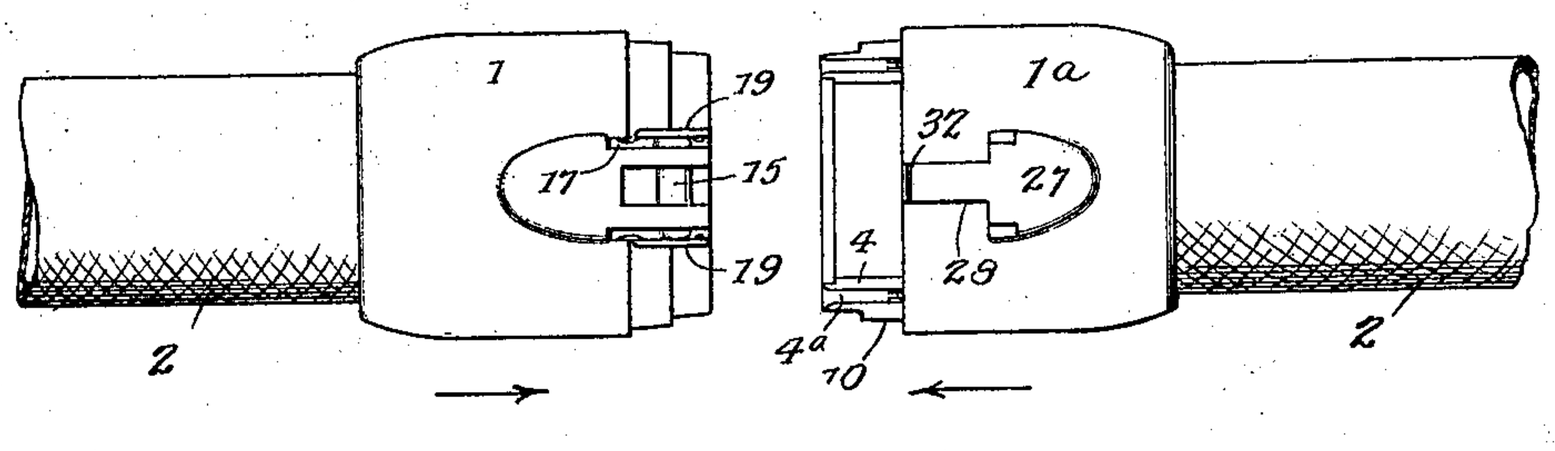
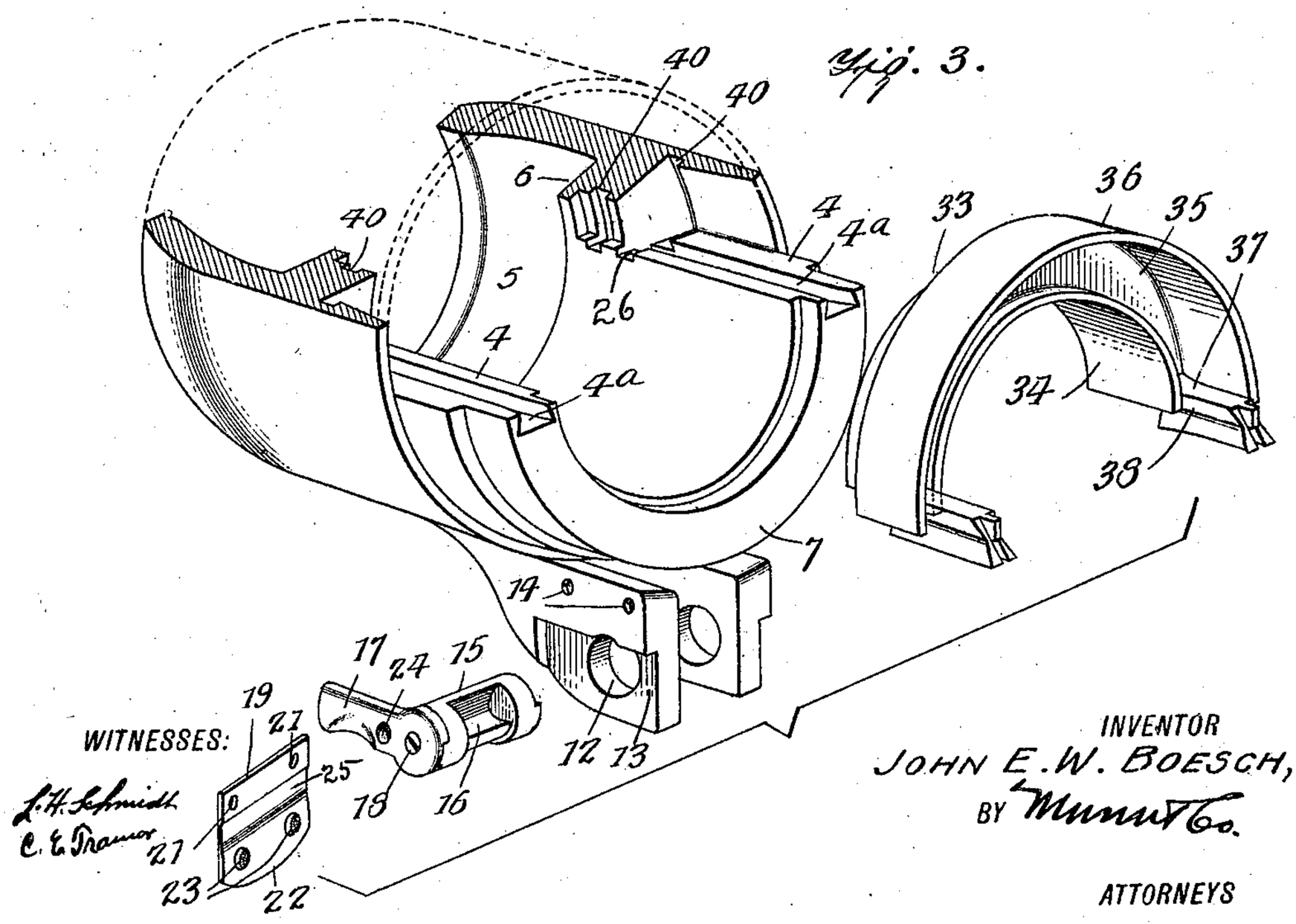


Fig. 3.



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2 SHEETS—SHEET 2.

Fig. 4

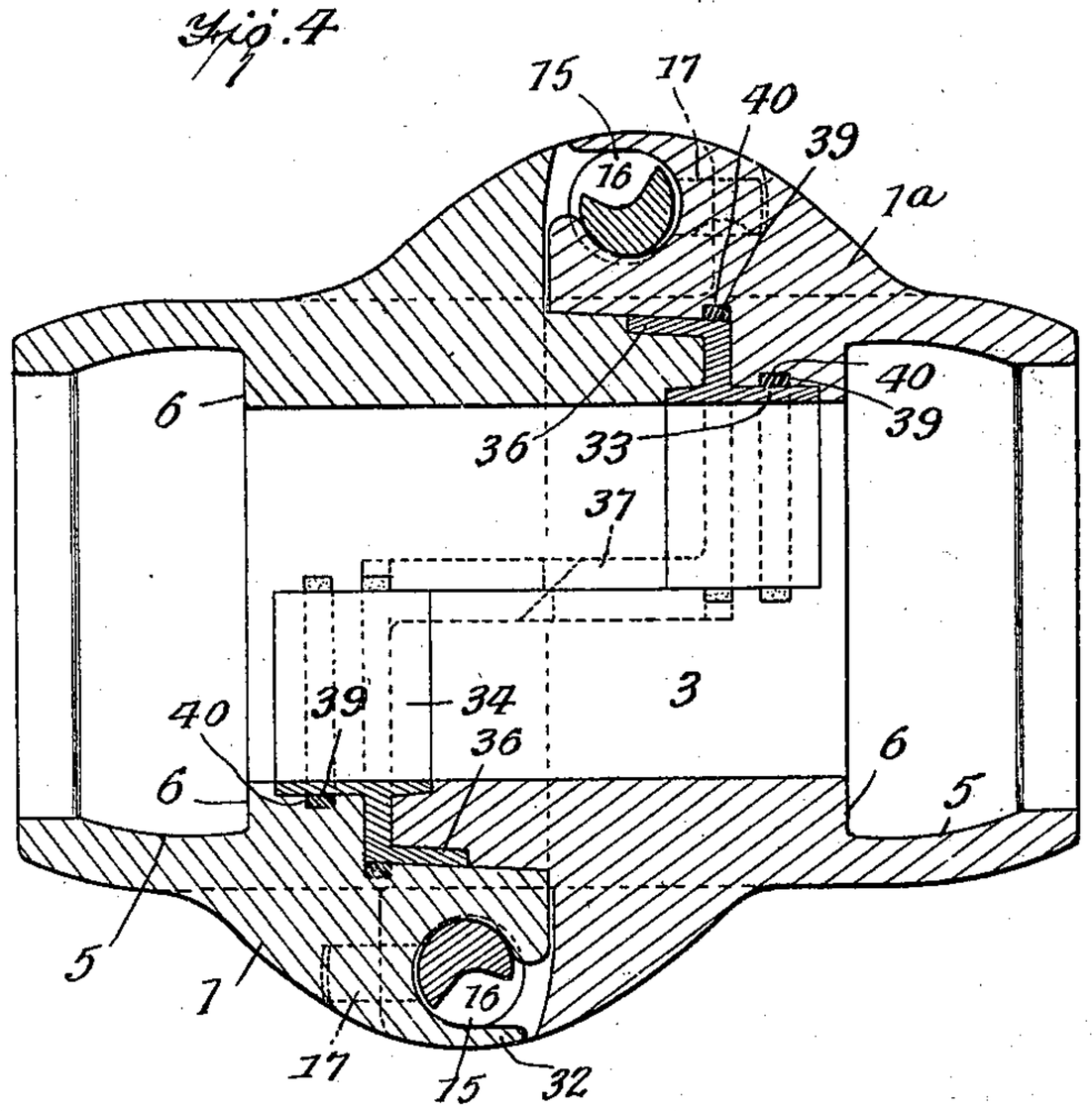


Fig. 5.

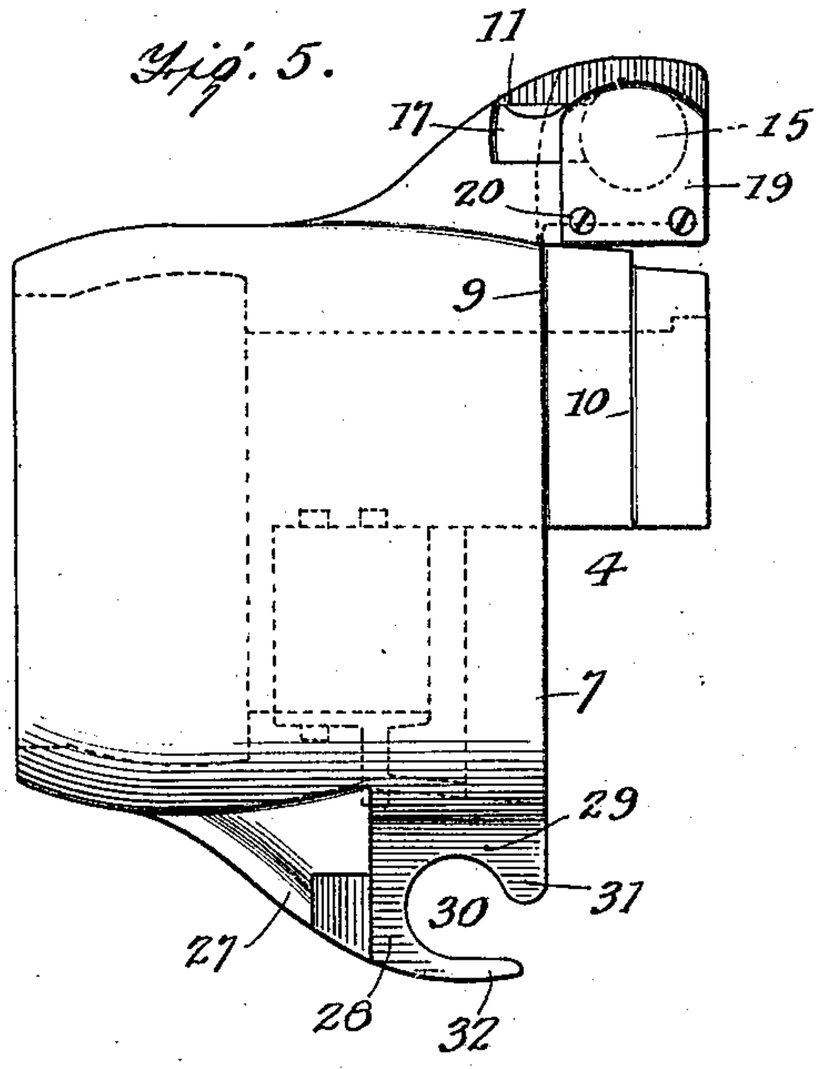
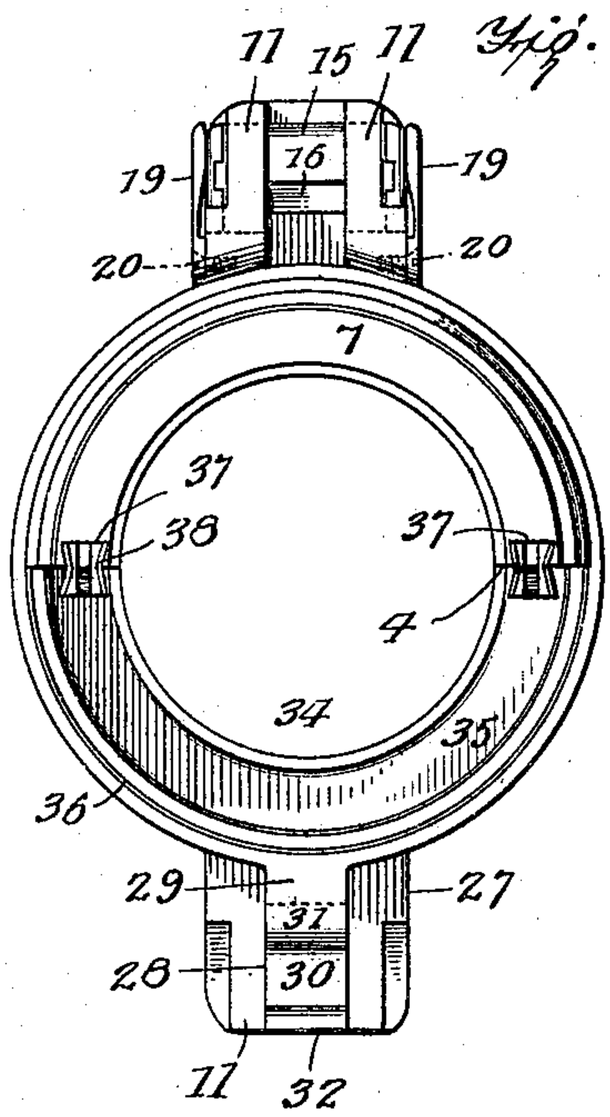


Fig. 6.



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UNITED STATES PATENT OFFICE.

JOHN E. W. BOESCH, OF COLUMBIA, NEVADA.

HOSE-COUPLING.

983,671. Specification of Letters Patent. **Patented Feb. 7, 1911.**

Application filed May 24, 1910. Serial No. 563,059.

To all whom it may concern:

Be it known that I, JOHN E. W. BOESCH, a citizen of the United States, and a resident of Columbia, in the county of Esmeralda and State of Nevada, have invented certain new and useful Improvements in Hose-Couplings, of which the following is a specification.

My invention is an improvement in hose couplings, and consists in certain novel constructions, and combinations of parts, hereinafter described and claimed.

The object of the invention is to provide a coupling of the character specified, which may be quickly connected and disconnected, by pulling the sections straight away from each other, thus avoiding the disadvantages of twisting the hose, and wherein an efficient lock is provided for preventing accidental disengagement.

Referring to the drawings forming a part hereof, Figure 1 is a side view of the coupling with the sections separated, Fig. 2 is a similar view at right angles to Fig. 1, Fig. 3 is an enlarged perspective view partly in section of one section, Fig. 4 is a longitudinal section with the sections coupled, Fig. 5 is an enlarged side view of one section, and Fig. 6 is an end view.

The embodiment of the invention shown in the drawings consists of similar sections 1 and 1ª, each being tubular, and substantially cylindrical in shape, and having its bore enlarged at the outer end to receive the hose 2. The wall of the enlargement is undercut as shown at 5, and a shoulder 6 is provided between the enlargement and the bore, against which the end of the hose abuts.

At its coupling end, each section is reduced annularly to form two annular shoulders 9 and 10, and one-half of that portion of the section which extends beyond the shoulder 9 is rabbeted as shown at 7 to form a shoulder 4 on each side of the section, running parallel with the length thereof. The shoulders 4 extend inside of the annular shoulder 10 as shown in Fig. 3, and each shoulder 4 is provided on its face with a dove tail or undercut longitudinal groove 4ª. At the inner end of each groove, the shoulder is also transversely grooved as shown at 26, the groove 26 intersecting the inner end of the groove 4ª.

Each section is provided with a pair of spaced ears 11 extending outwardly above the shoulders 9 and 10, and spaced apart from the outer face of the reduced portion, and the ends thereof are substantially flush with the end of the section. The ears are transversely perforated at 12, the perforations being in alinement, and the outer face of each ear is cut away to form a countersink or recess 13, in which the perforation opens, and two openings 14 are provided above the recess. A bolt 15 is adapted to pass through the perforations, the said bolt having a longitudinal recess 16 in the side wall thereof, and a lever 17 is secured to each end of the bolt by a screw 18.

When the bolt 15 is engaged with the perforations 12, the lever fits the side and end wall of the countersink, and a plate 19 is secured to the outer face of the ear by means of screws 20 engaging the openings 14, and passing through registering openings 21 in the plate. As shown more especially in Fig. 3, the free edge of the plate is thickened as indicated at 22, and is provided with spaced recesses 23. When the plate is in place, the recesses 23 are on opposite sides of the screw 18, and are adapted to be engaged by a lug 24 on the lever 17, to hold the bolt in adjusted position. It will be noticed that the plate is thinned transversely at 25 at approximately its center, and being of resilient material, that portion of the plate on the opposite side of the thinned portion from the recess 20 acts as a spring to hold the lever, while permitting the lugs to be easily disengaged.

At a point diametrically opposite the ears 11, each section is provided with a lug 27, whose sides are cut away near its outer end 28 to form an ear 29, which is recessed at 30, to form a nose 31, and a lip 32 overlying the nose but spaced apart therefrom. The recess 30 is shaped to fit the bolt 15, as shown in Fig. 4, and the recess 16 of the bolt is of sufficient depth to receive the nose 31, when the bolt is properly turned to permit its entrance. The lip 32 overlies the bolt, and prevents lateral movement. The lever 17 is so arranged with respect to the bolt, that when the lug 24 is engaged with one of the openings 23 of the plate 19, the recess 16 of the bolt will be out of position for engagement by the nose as shown in Fig. 4, and when the lug 24 is engaged with the other opening 23, the nose will be received in the said recess.

A packing section 33 is connected with

each of the coupling sections, each packing section being composed of a half-ring 34 having at approximately the center of its outer face a rib 35, provided with an annular flange 36, and at each end of the section, between the flange 36 and the half ring 34 is arranged a bar 37, each of whose faces is constricted longitudinally at its center at 38 to fit the grooves 4ª of the shoulder 4.

It will be understood that when the coupling sections are connected, the grooves 4ª of the sections are in register, and the bar 37 is shaped to fit the two grooves. A semicircular gasket 39 is arranged on the outer faces of the portions 34 and 36 of the packing, the sections being grooved at 40 to receive the said gaskets, which assist in retaining the packings in position.

In coupling the sections, they are moved toward each other in the direction of the arrows in Figs. 1 and 2, the levers being turned 180° from the position shown in Fig. 4, or in such position that the noses 31 will be received in the recesses 16 of the bolts. As they are pushed together, the bolt is rotated by the nose, so that when closely pressed together, the lever will be held by the engagement of the lug 24 with the proper opening 23 of the plate. To release the sections, the free ends of the levers 17 are pulled outwardly, until the levers are at right angles to the hose, after which the sections are pulled apart. The lever 17 is partially covered by the plate, so that it cannot be caught and turned accidentally. The act of coupling is automatic when the levers are freed, and no turning or twisting of the hose is necessary.

It will be observed from an inspection of Fig. 5, that the ends of the levers 17 extend beyond the plates, so that they may be moved into such position that the nose 31 will engage with recess, after which, by merely pulling the sections apart, the bolt will be rotated to free the sections. The lever must be moved to a position at right angles to the hose before the sections can be pulled apart, so that there is no possibility of accidental uncoupling.

I claim:

1. A coupling of the character specified, comprising similar sections, each having its engaging end rabbeted to lap upon the rabbeted end of the other section, the side edges of the rabbeted portion being provided with undercut longitudinal grooves, the grooves of the sections registering when they are coupled together, each section having a pair of transversely perforated ears extending over the rabbeted portion at the center thereof, a bolt rotatable in the ears, a lever at the end of the bolt, each section having at the opposite side from the ears a nose adapted to be received between the ears of the other section and to engage behind the bolt, and an overlying lip for engaging above the bolt, the bolt having a recess in its peripheral face of sufficient depth to receive the nose when the bolt is in proper position, to permit disengagement of the nose from behind the bolt, a resilient plate secured to each section over the end of the bolt, and means on the plate for engaging the lever to hold the bolt with the recess in or out of position for engagement by the nose, and packings arranged between the sections, each packing having at its end a bar fitting with the registering grooves of the side edges of the lugs.

2. A coupling of the character specified, comprising similar sections, each having its engaging end rabbeted to lap upon the rabbeted end of the other section, the side edges of the rabbeted portion being provided with undercut longitudinal grooves, the grooves of the sections registering when they are coupled together, each section having a pair of transversely perforated ears extending over the rabbeted portion at the center thereof, a bolt rotatable in the ears, a lever at the end of the bolt, each section having at the opposite side from the ears a nose adapted to be received between the ears of the other section and to engage behind the bolt, and an overlying lip for engaging above the bolt, the bolt having a recess in its peripheral face of sufficient depth to receive the nose when the bolt is in proper position, to permit disengagement of the nose from behind the bolt, a resilient plate secured to each section over the end of the bolt, and means on the plate for engaging the lever to hold the bolt with the recess in or out of position for engagement by the nose.

3. A coupling of the character specified, comprising similar sections, each having its engaging end rabbeted to lap the end of the other section, a pair of ears on each section extending over the rabbeted portion at the center thereof, a bolt journaled transversely in the ears, a nose on each section and oppositely arranged with respect to the ears for engaging behind the bolt of the other section, a lip adjacent to each nose and overlying the bolt when the nose is engaged therewith, each bolt having a peripheral recess for receiving the nose, a lever connected with each bolt for moving the same to bring the recess into and out of register with the nose to permit its disengagement from the bolt, and means engaging the lever for holding the bolt in adjusted position.

4. A coupling of the character specified, comprising similar sections, each having its engaging end rabbeted to lap the end of the other section, a pair of ears on each section extending over the rabbeted portion at the center thereof, a bolt journaled transversely in the ears, a nose on each section and oppo-

sitely arranged with respect to the ears for engaging behind the bolt of the other section, a lip adjacent to each nose and overlying the bolt when the nose is engaged therewith, each bolt having a peripheral recess for receiving the nose, and yielding means for holding the bolt with the recess in or out of register with the nose.

5. A coupling of the character specified, comprising similar sections, each having its engaging end rabbeted to lap the end of the other section, a bolt journaled transversely of each section at the center of the rabbeted portion, a nose on each section opposite the bolt for engaging behind the bolt, a lip adjacent to the nose and overlying the bolt when the nose is engaged therewith, said bolt having a peripheral recess for receiving the nose to permit the sections to disengage, a lever connected with the bolt for moving the same, and resilient means engaging the lever for holding the bolt with the recess in or out of register with the nose.

6. A coupling of the character specified, comprising similar sections, each having its engaging end rabbeted to lap the end of the other section, a bolt journaled transversely of each section at the center of the rabbeted portion, a nose on each section opposite the bolt for engaging behind the bolt, a lip adjacent to the nose and overlying the bolt when the nose is engaged therewith, said bolt having a peripheral recess for receiving the nose to permit the sections to disengage, and resilient means for holding the bolt with the recess in or out of register with the nose.

7. A coupling of the character specified, comprising similar sections, each having at one side a pair of transversely perforated ears extending toward the adjacent section, a bolt journaled in the ears, a nose on each section opposite the ears for engaging behind the bolt of the other section to prevent longitudinal movements of the sections away from each other, a lip adjacent to the nose and overlying the bolt when the nose is engaged therewith, the bolt having a recess for receiving the nose to permit the sections to disengage, a packing between the sections, a lever for moving the bolt and resilient means engaging the lever for holding the bolt with the recess in or out of register with the nose.

8. A coupling of the character specified, comprising similar sections, each having at one side a pair of transversely perforated ears extending toward the adjacent section, a bolt journaled in the ears, a nose on each section opposite the ears for engaging behind the bolt of the other section to prevent longitudinal movements of the sections away from each other, a lip adjacent to the nose and overlying the bolt when the nose is engaged therewith, said bolt having a recess for receiving the nose to permit the bolt to be disengaged therefrom, means for holding the bolt with the recess in or out of register with the nose, and a packing between the sections.

9. A coupling of the character specified, comprising similar sections, each having at one end a pair of transversely perforated ears extending toward the adjacent section, a bolt journaled in the ears, a nose on each section opposite the ears for engaging behind the bolt of the other section to prevent longitudinal movements of the sections away from each other, a lip adjacent to the nose and overlying the bolt when the nose is engaged therewith, said bolt having a recess for receiving the nose to permit the bolt to be disengaged therefrom, and means for holding the bolt with the recess in or out of register with the nose.

10. A coupling of the character specified, comprising similar sections, each section having its engaging end rabbeted to lap alongside the end of the other section, a bolt journaled transversely of each section at approximately the center of the rabbeted portion, a nose at the opposite side from the bolt for engaging behind the bolt of the other section, said bolt having a recess for receiving the nose to permit the bolt to be disengaged therefrom, a lever connected with the bolts for moving the same, and resilient means engaging the lever for holding the bolt with the recess in or out of register with the nose.

11. A coupling of the character specified, comprising similar sections, each section having its engaging end rabbeted to lap alongside the end of the other section, a bolt journaled transversely of each section at approximately the center of the rabbeted portion, a nose at the opposite side from the bolt for engaging behind the bolt of the other section, the bolt having a recess for receiving the nose to permit the bolt to be disengaged therefrom and resilient means for holding the bolt with the recess in or out of register with the nose.

12. A coupling of the character specified, comprising similar sections, each section having its engaging end rabbeted to lap alongside the end of the other section, a bolt journaled transversely of each section at approximately the center of the rabbeted portion, a nose at the opposite side from the bolt for engaging behind the bolt of the other section, the bolt having a recess for receiving the nose to permit the bolt to be disengaged therefrom, resilient means for holding the bolt with the recess in or out of register with the nose, a two part packing between the contacting faces of the sections, and means for securing the packing in place.

13. A coupling of the character specified, comprising similar sections, each section having its engaging end rabbeted to lap alongside the end of the other section, a

bolt journaled transversely of each section at approximately the center of the rabbeted portion, a nose at the opposite side from the bolt for engaging behind the bolt of the other section, the bolt having a recess for receiving the nose to permit the bolt to be disengaged therefrom, resilient means for holding the bolt with the recess in or out of register with the nose, and a packing between the contacting faces of the sections.

14. A coupling of the character specified, comprising similar sections, each section having its engaging end rabbeted, the sides of the rabbeted portions having undercut grooves, and the grooves registering when the sections are coupled, a substantially semicircular packing between the end of each rabbeted portion and the other section, a bar at the ends of each packing, said bar being shaped to fit the registering grooves, and means for preventing longitudinal movements of the sections with respect to each other.

15. A coupling of the character specified, comprising similar sections, each section having its engaging end rabbeted to lap alongside the end of the other section, a bolt journaled transversely of each section at approximately the center of the rabbeted portion, a nose on the opposite side of the bolt for engaging behind the bolt of the other section, said bolt having a recess for receiving the nose to permit the nose to pass the bolt, and means for holding the bolt with the recess in or out of register with the nose.

JOHN E. W. BOESCH.

Witnesses:
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B. I. BARLOW.