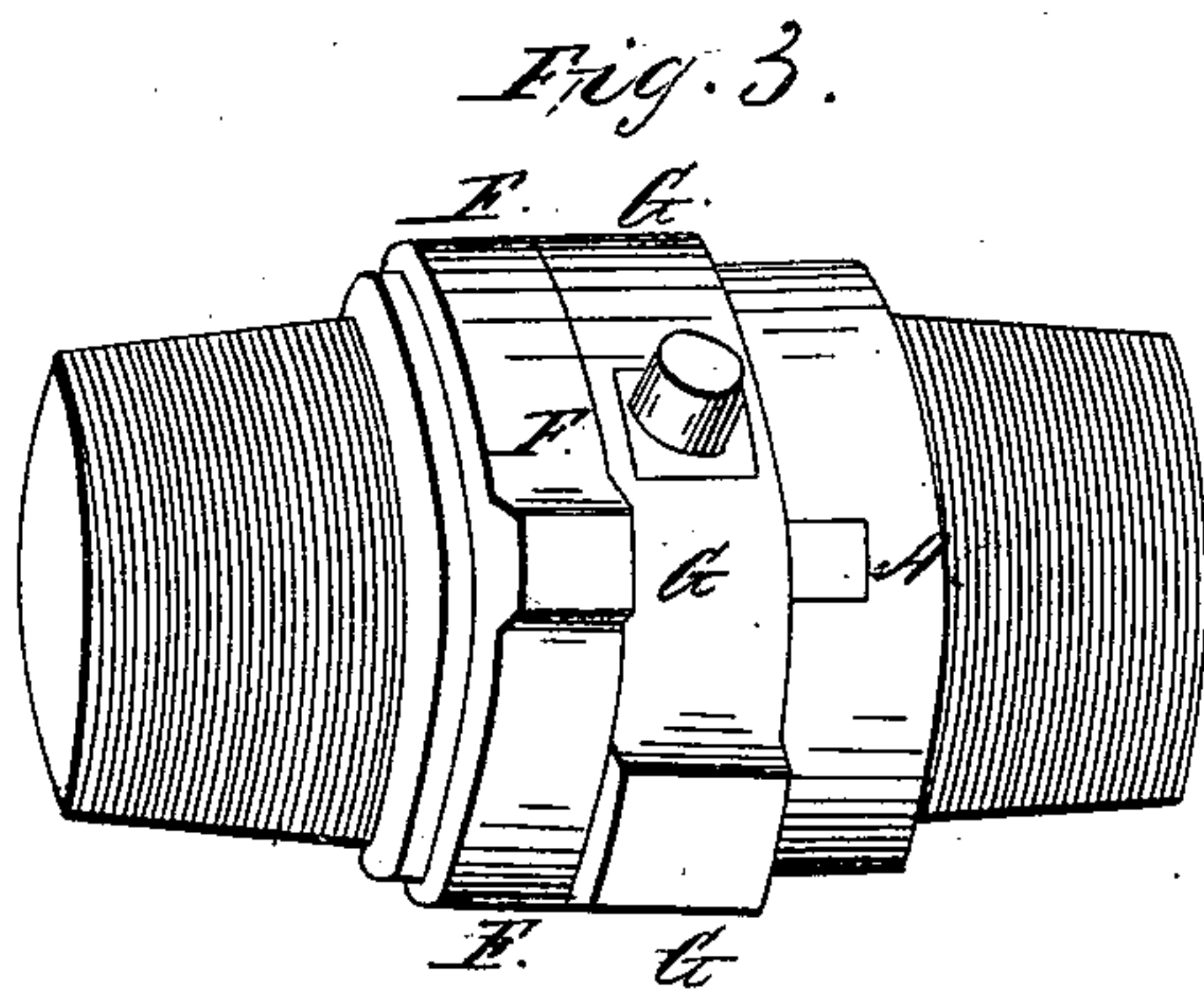
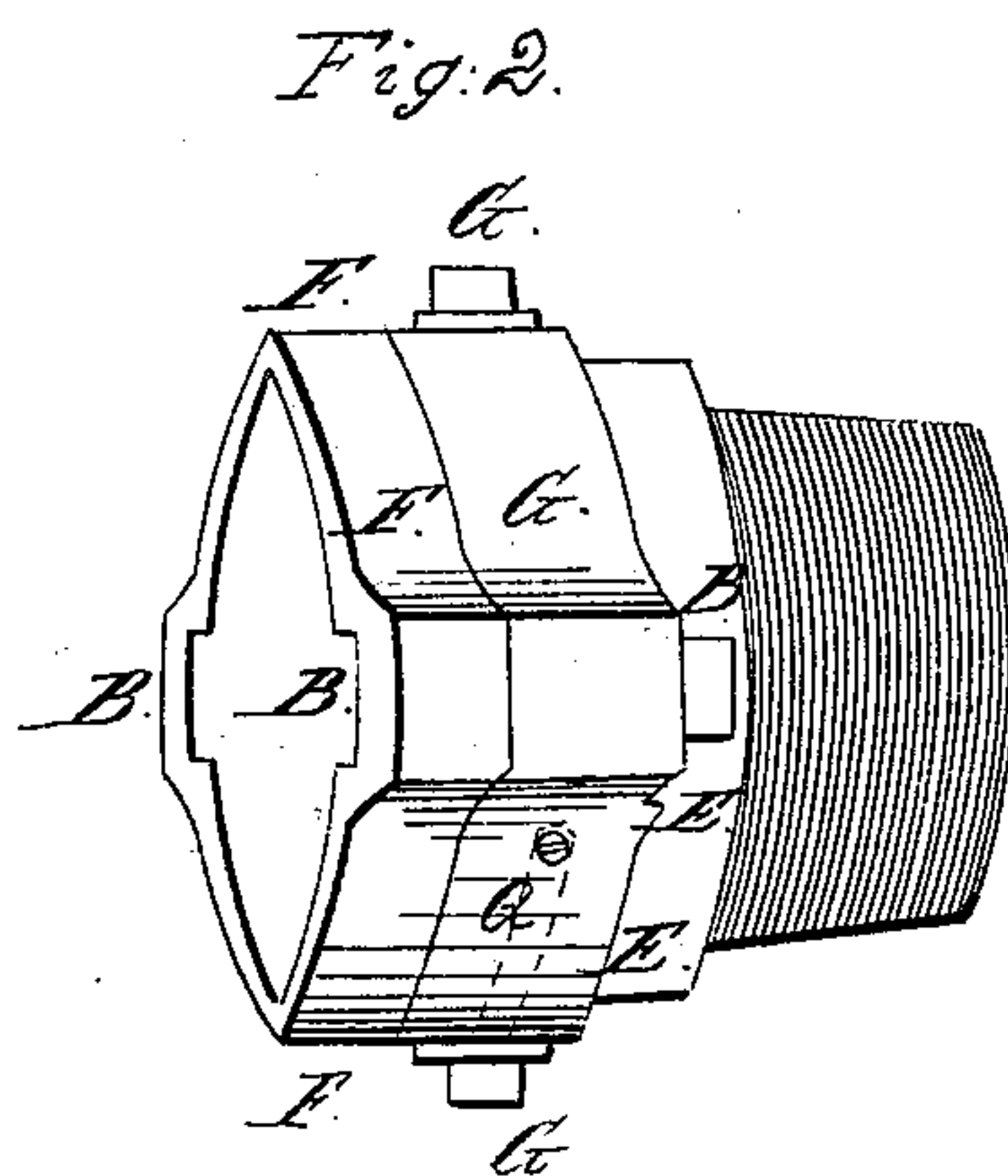
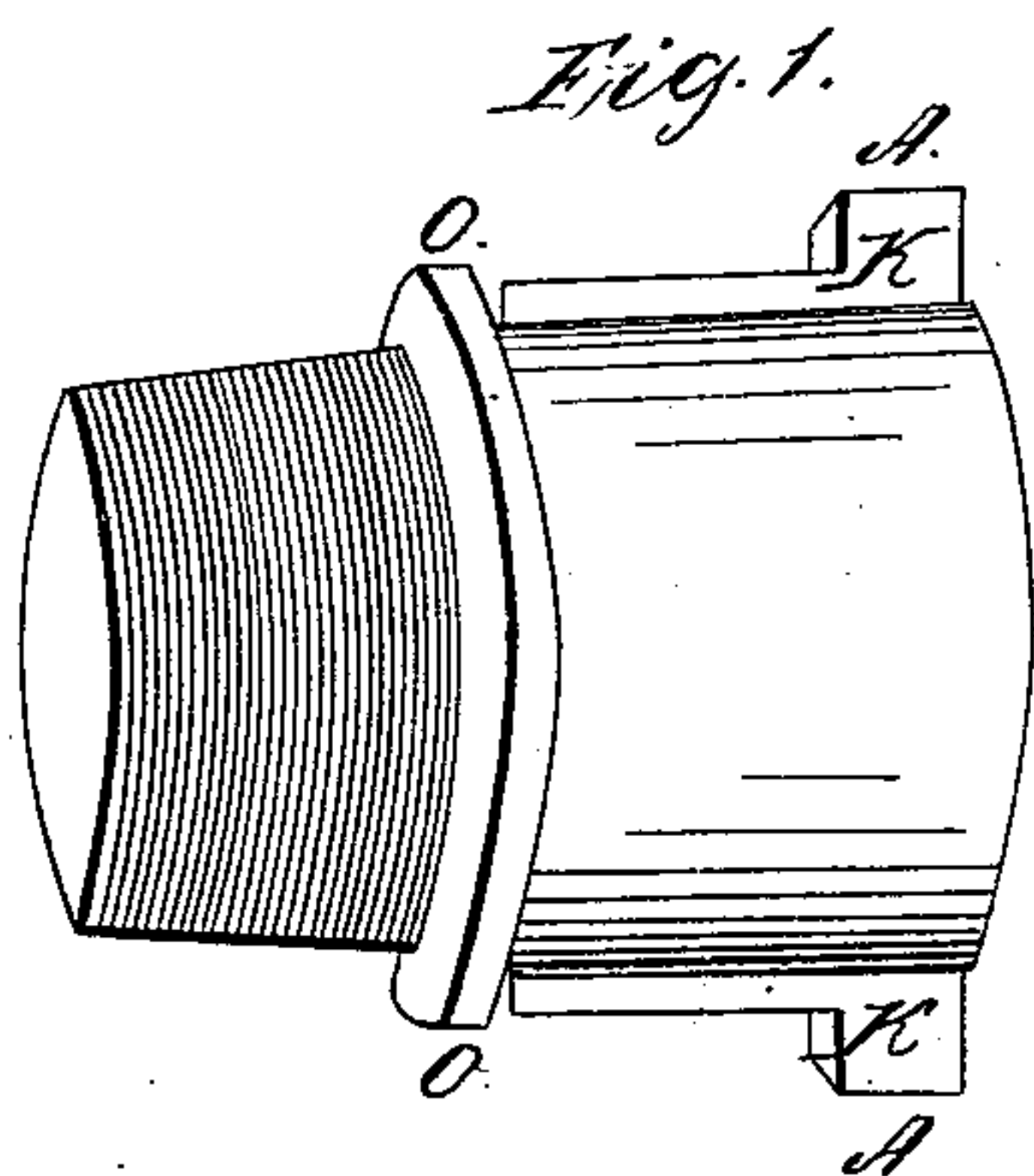


R. J. Gaines,
Hose Coupling
N^o 76,622. Patented Apr. 14, 1868.



Witnesses:
D. Newland Davis
L. H. Harris.

Inventor:
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United States Patent Office.

ROBERT JOHN GAINES, OF PORTLAND, CONNECTICUT.

Letters Patent No. 76,622, dated April 14, 1868.

IMPROVEMENT IN HOSE-COUPPLINGS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, ROBERT JOHN GAINES, of Portland, in the county of Middlesex, and State of Connecticut, have invented a new and improved Hose-Coupling; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon.

The device consists in providing the outside of the male part of the coupling with two lugs, one upon each side, and directly opposite each other, which lugs run from the shoulder, upon this part, to the face-end, or the end that is inserted into the female part of the coupling, and at this latter extremity the lugs are constructed so as to form a catch. This catch is about one-half of an inch in length, and is formed by simply carrying this end of the lug up at right angles to the rest of it (the lug) about one-fourth of an inch, and one end of the male part has a screw-thread upon it for the purpose, as in all couplings of hose, of screwing it into the end of the hose.

And the device further consists in providing the female part with a strong shoulder, upon the face-end of it, (the expression, "face-end," is used in contradistinction to the screw-end of the part,) and also a movable band or ring, which plays upon the outside of this part, and is kept upon it, and prevented from playing only within a limited space, by means of two little screws, on opposite sides of the ring, which pass entirely through the ring, and project a little distance beyond the inside of the ring into grooves, upon the body of the female part, outside of it, and under the movable ring. These grooves, two in number, one upon each side of this part, go only partly round, and thus, by aid of the screws before mentioned, the ring is prevented from turning only to so far as the grooves extend; and the female part of the coupling is further provided with two slots, (which are also a part of the device,) upon the inside of it, one upon each side, and directly opposite each other. These slots run lengthwise of this part, and are cut from the face-end through nearly to a shoulder formed upon the inside of and at the back of this part, room sufficient being left between the end of the slot and the shoulder last mentioned, for a thin piece of rubber or other packing. After those slots pass the shoulder upon the face-end of the female part, (which shoulder is upon the outside of it,) they cut entirely through the body of the female part, and also cut the inside of the movable ring, slotting it. And those slots, after passing under the ring, extend beyond it far enough (they being about one-half of an inch wide) to make an opening large enough to permit the catches upon the end of the lugs on the male part to come through, when the parts are put together. And into these slots the lugs on the male part pass when the parts are put together.

The device further consists in providing, upon the outer or visible edge of the movable band or ring, two inclined planes, which planes run from slot to slot, in the same direction. These inclined planes are made upon the ring for the purpose of setting up the joint firmly, and of holding the parts when placed together; for the female part is provided with the strong shoulder, before referred to, and the male part is provided with the catches upon the ends of the lugs, which catches, when the parts are put together, come through the opening or slot made through the body of the female part, just back of the movable ring, and rise above the surface of the female part one-fourth of an inch. This brings the movable ring between the strong shoulder of the female part and the catches on the ends of the lugs on the male part, and when the ring is turned in the opposite direction from which the inclined planes run, the ring presses between the shoulder and the catches, and the further the ring is turned, the more firmly the joint is set up, and the more firmly the parts are held together. The female part is also provided with a screw-thread upon one end, for the purpose of screwing it into the hose, as are all hose-couplings.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation, referring to the drawings which make a part of this specification.

The coupling is made of brass, and the male part, represented by Figure 1 of the drawings, is provided with lugs, two in number, upon the outside of it, and shown by A A of fig. 1, which lugs run from the shoulder O O of fig. 1, to its face or inside end, and terminating with the catches K K of the fig. 1, which are formed sub-

stantially as hereinbefore described, being about one-half an inch long, and about the same in width. The lugs are about one-fourth of an inch high, and about one-half of an inch in width. The female part is provided with a strong shoulder, F F F, of Figure 2, which represents the female part, which shoulder is upon the outside of it, at the face-end, and it is also provided with a movable ring or band, G G G, of fig. 2, which plays upon the outside of the female part, and is kept in its place, and prevented from playing only within a limited space, by means of two little screws on opposite sides of the ring, one of which is shown by D, in fig. 2, which pass entirely through the ring, and project a little distance beyond the inside of the ring, into grooves provided upon the outside of the female part and immediately beneath the movable band or ring, and by these grooves and these screws the ring is kept in its place, and kept from turning only in a limited space. The grooves only run part way around the female part, commencing at a slot and running to a slot. Hence the ring can turn only so far as the grooves run. The female part is further provided with two slots, as represented by B B B', of fig. 2, upon the inside of it, one upon each side. These slots run lengthwise of this part, and are cut through from the face-end nearly to the shoulder formed upon the inside of and at the back of this, the female part, room being left for a piece of packing, as before shown. After these slots pass the shoulder F F F, in fig. 2, they cut entirely through the body of the female part, and also cut the inside of the ring G G G, slotting it. And these slots, after passing under the ring, extend beyond it, as is shown by B of fig. 2, far enough, they being about one-half of an inch wide, to make an opening large enough, as is shown by the same, B', of fig. 2, to permit the catches K K of fig. 1 to come through, when the parts are put together. And into these slots B B B', of fig. 2, the lugs A A pass when the parts are put together.

The movable ring or band is provided upon the outer or visible edge with two inclined planes, one of which is shown by E E of fig. 2 of the drawings, which planes run from slot to slot upon the edge of the ring, in the same direction as hereinbefore described, and for the purpose hereinbefore set forth. These inclined planes are constructed upon the edge of the ring.

Figure 3 of the drawings represents the parts of the coupling put together, and with the joint set up. F F F of fig. 3 represent a strong shoulder on female part of the coupling, and letter A, in fig. 3, shows the catch on the male part, which comes through the opening or slot, and rises above the surface of the female part one-fourth of an inch. Letters G G G of fig. 3 represent the movable ring turned between the catch A and the shoulder F F F of fig. 3, and holding the parts firmly together. The movable ring is provided with lugs, so that a wrench may be used, if necessary, in tightening the joint.

What I claim as my invention, and desire to secure by Letters Patent, is—

A hose-coupling, the male and female parts or butts of which are constructed substantially as hereinbefore described, and having a movable band or ring fitted upon the female part or butt of the coupling itself, and constructed substantially as hereinbefore, to be used in connection with catches K K of fig. 1, and the flange upon the inner end of the female part or butt.

And I also claim, as a part of my device, the small screws passing through said ring, and extending into the grooves under said ring, upon the body of the female part, for the purpose of indicating when the grooves or slots in the said ring are on a line with the slots in the female part or butt, all of which is constructed substantially as hereinbefore described, substantially as and for the purposes herein set forth.

ROBT. JOHN GAINES.

Witnesses:

D. NEWLAND DAVIS,
C. W. HARRIS.