(No Model.)

2 Sheets—Sheet 1.

J. S. MILES.

PIPE COUPLING.

No. 589,362. Patented Aug. 31, 1897.

Fig. 1.

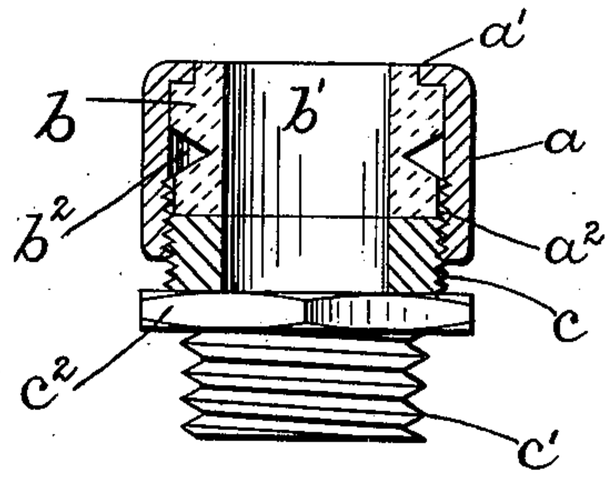


Fig. 2.

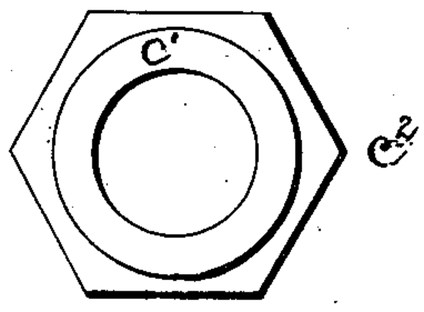
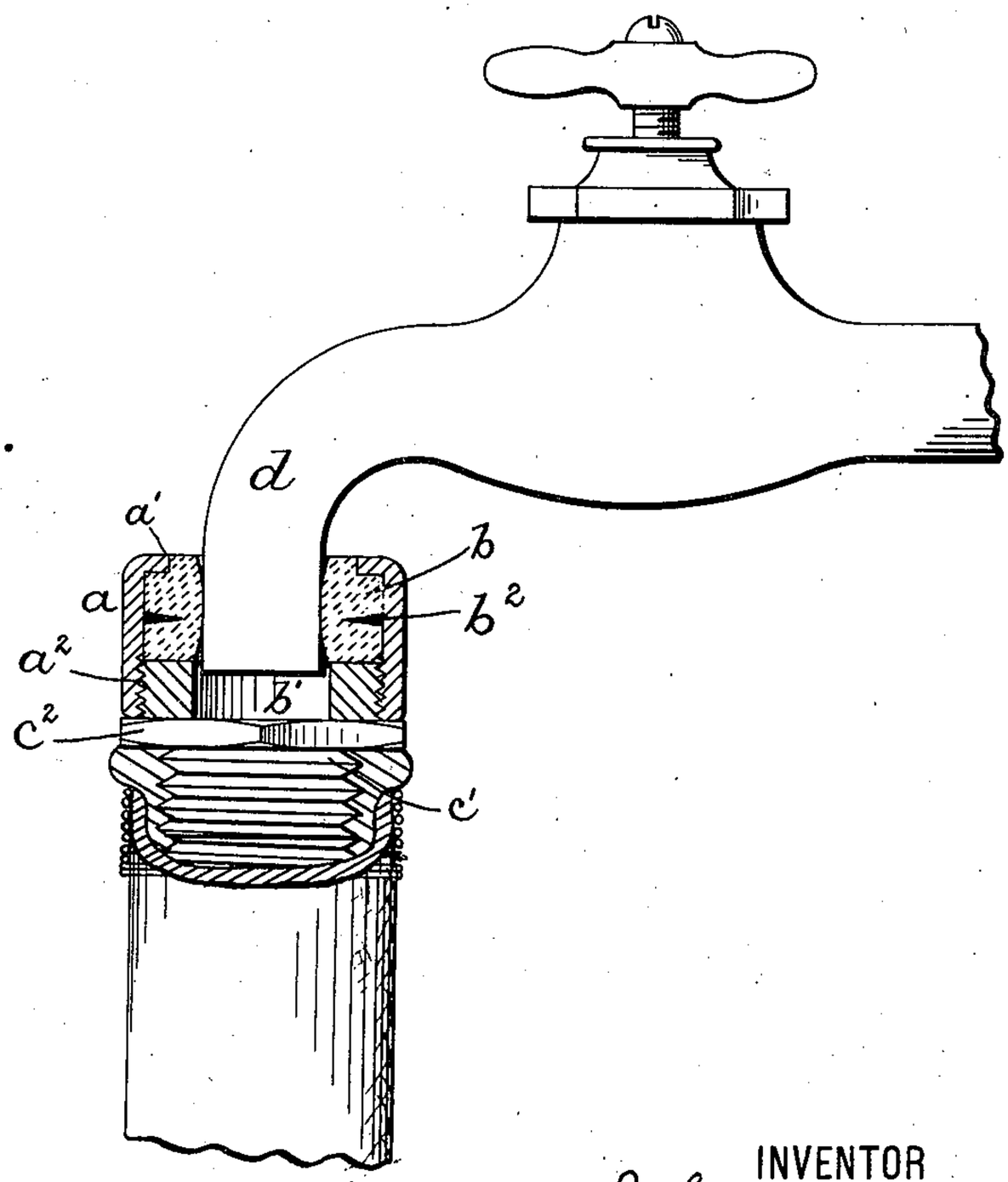


Fig. 3.



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(No Model.)

2 Sheets—Sheet 2.

J. S. MILES.

PIPE COUPLING.

No. 589,362. Patented Aug. 31, 1897.

Fig. 4.

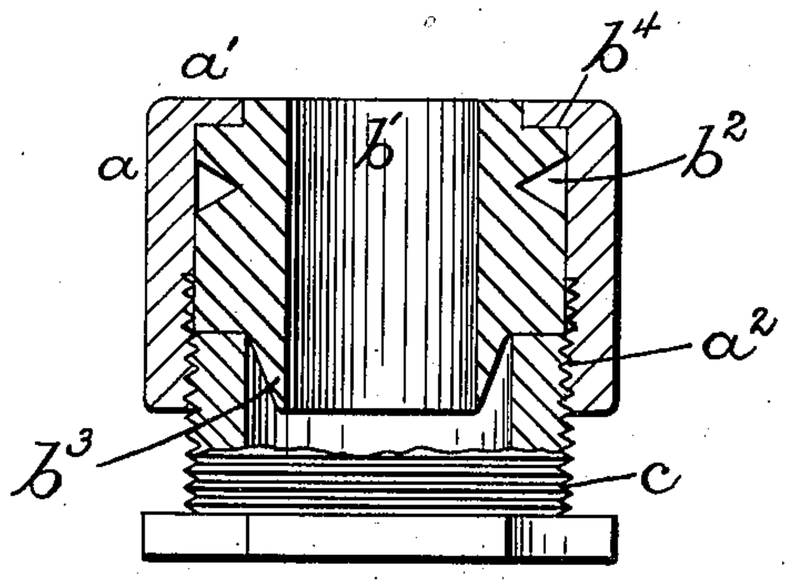


Fig. 6.

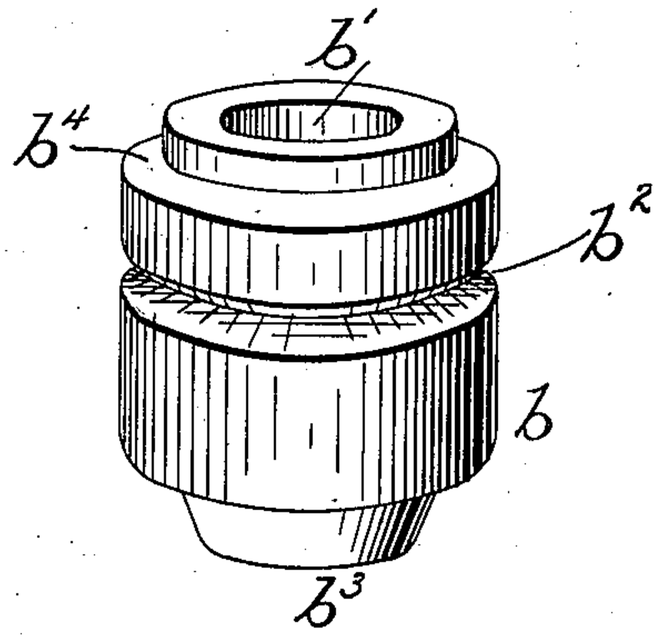
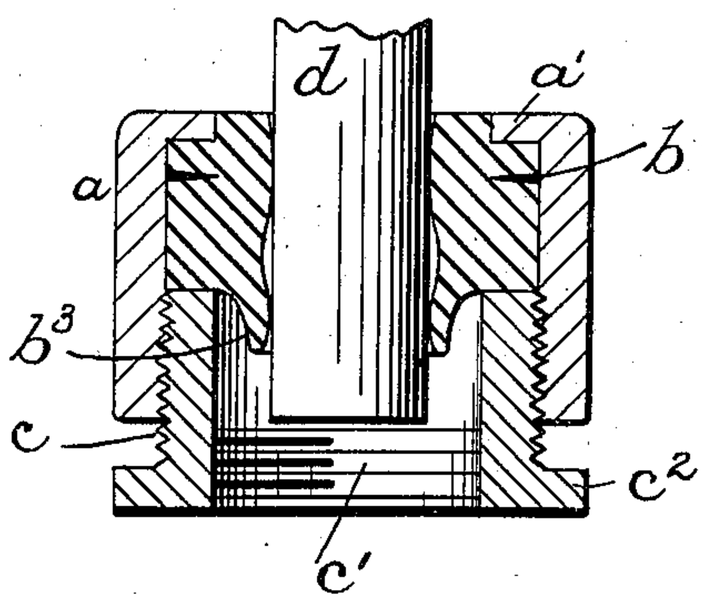


Fig. 5.



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UNITED STATES PATENT OFFICE.

JOHN S. MILES, OF DAYTON, OHIO.

PIPE-COUPLING.

SPECIFICATION forming part of Letters Patent No. 589,362, dated August 31, 1897.

Application filed February 4, 1895. Serial No. 537,245. (No model.)

To all whom it may concern:

Be it known that I, JOHN S. MILES, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Pipe-Couplings, of which the following is a specification.

My invention relates to improvements in couplings especially designed for making connections with water-pipes or faucets, the connection being in the nature of a slip connection and designed to be applied to a smooth surface or surfaces without screw-threads or engaging projections.

My invention consists in the constructions hereinafter described, and set forth in the claims.

In the accompanying drawings, which form a part of this specification, Figure 1 is a partial longitudinal sectional view of a device embodying my invention. Fig. 2 is a top or plan view of the same. Fig. 3 is a side elevation of the same shown connected to a faucet, some of the parts being broken away and shown in vertical section to more clearly illustrate the construction and operation. Figs. 4, 5, and 6 are views showing a modification, Figs. 4 and 5 being each a sectional view, the parts in the different views being in different positions of adjustment, Fig. 6 being a detail view in perspective of the flexible sleeve removed.

Like parts are represented by similar letters of reference in the several views.

My improved coupling consists, essentially, of an outer casing a, having at one end an inner projecting annular flange a' and at the opposite end being internally screw-threaded, as shown at a^2. Within this casing and fitted at the upper end to the annular flange a' is a flexible sleeve b, preferably of rubber. This sleeve b has an internal bore b', slightly larger than the pipe, faucet, or other water connection to which it is to be applied. It is further provided about the middle of its length on its outer periphery with a deep-cut V-shaped groove b^2.

In the lower end of the casing a is screwed the end of a nipple c, internally screw-threaded at one end to fit the threads a^2 in the casing and at the opposite end, as shown at c', adapted to be connected by screw-threads or otherwise to the pipe, hose, or other device which is to be attached to the tube, faucet, or pipe with the smooth exterior. This nipple is also further provided with an enlarged flange or shoulder c^2, preferably hexagonal in shape, to which may be fitted a wrench or other device for turning the nipple in the casing a.

In operation the coupling, with the parts in the position shown in Fig. 1, is inserted onto the exterior of the pipe, faucet, or other device d and the nipple c screwed into the casing, so as to compress the sleeve, which, by reason of the V-shaped groove b^2, will be forced inwardly at a point opposite said groove and firmly impinge and bind upon the outer periphery of the device to which it is attached.

In Figs. 4, 5, and 6 I have shown the construction of the sleeve somewhat modified, the modification consisting in providing said sleeve at the end toward the compressing, nipple with a depending lip b^3, adapted to hug the faucet or pipe on which the sleeve is placed. This depending lip b^3 is considerably smaller than the interior bore of the nipple c, thus forming an annular chamber within the nipple about said depending lip to receive the water and thus clamp said lip firmly against the pipe or faucet d by the hydrant-pressure, as shown in Fig. 5. When this additional element is employed, the V-shaped groove b^2 may be placed nearer the opposite end of the sleeve, the result being that two impinging points are secured upon the pipe or faucet instead of one. A more stable connection is thus formed, the coupling being more firmly held against any lateral or oscillating movement on the faucet or pipe. The sleeve b is also preferably shouldered down, as shown at b^4, to form a bearing-seat for the flange a', so that the end of said sleeve will stand substantially flush with the end of the casing and at the same time furnish sufficient bearing against the flange a' to securely hold the sleeve in place when it is compressed by the nipple c.

I have found in practice that a device thus constructed can be connected to faucets and pipes with smooth exteriors, so as to resist any ordinary pressure which may be applied thereto.

Having thus described my invention, I claim—

1. A coupling consisting essentially of an outer casing, an inner flexible sleeve having a V-shaped groove and a depending lip, a movable nipple adapted to be forced in said casing and engage said sleeve, said nipple having an interior bore slightly larger than the depending lip, substantially as specified.

2. The combination with a tubular pipe, an outer casing having an inner projecting flange, a flexible sleeve in said casing provided with a central bore and having a V-shaped groove on its outer periphery and a depending lip at its end opposite said flange, a screw-threaded nipple in said casing, said nipple having a bore slightly greater than the diameter of said flange, substantially as specified.

In testimony whereof I have hereunto set my hand this 6th day of December, A. D. 1894.

JOHN S. MILES.

Witnesses:
H. J. CHANCELLOR,
J. A. MILLER.