

C. NELSON.

COUPLING.

APPLICATION FILED OCT. 31, 1908.

924,368.

Patented June 8, 1909.

Fig. 1

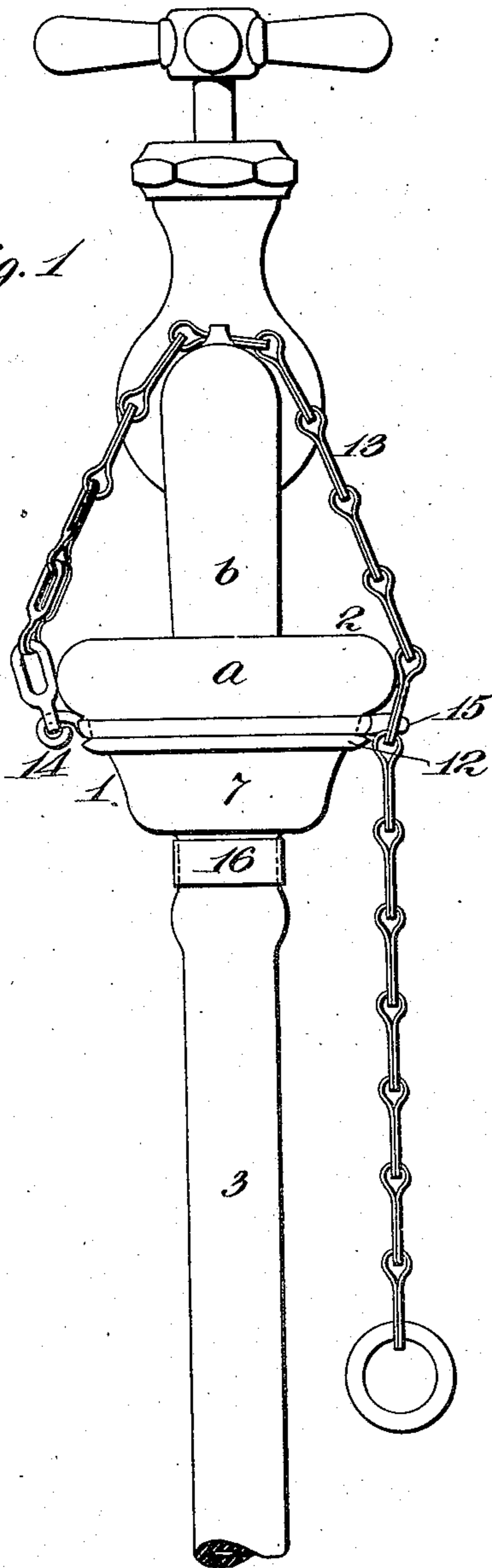


Fig. 2

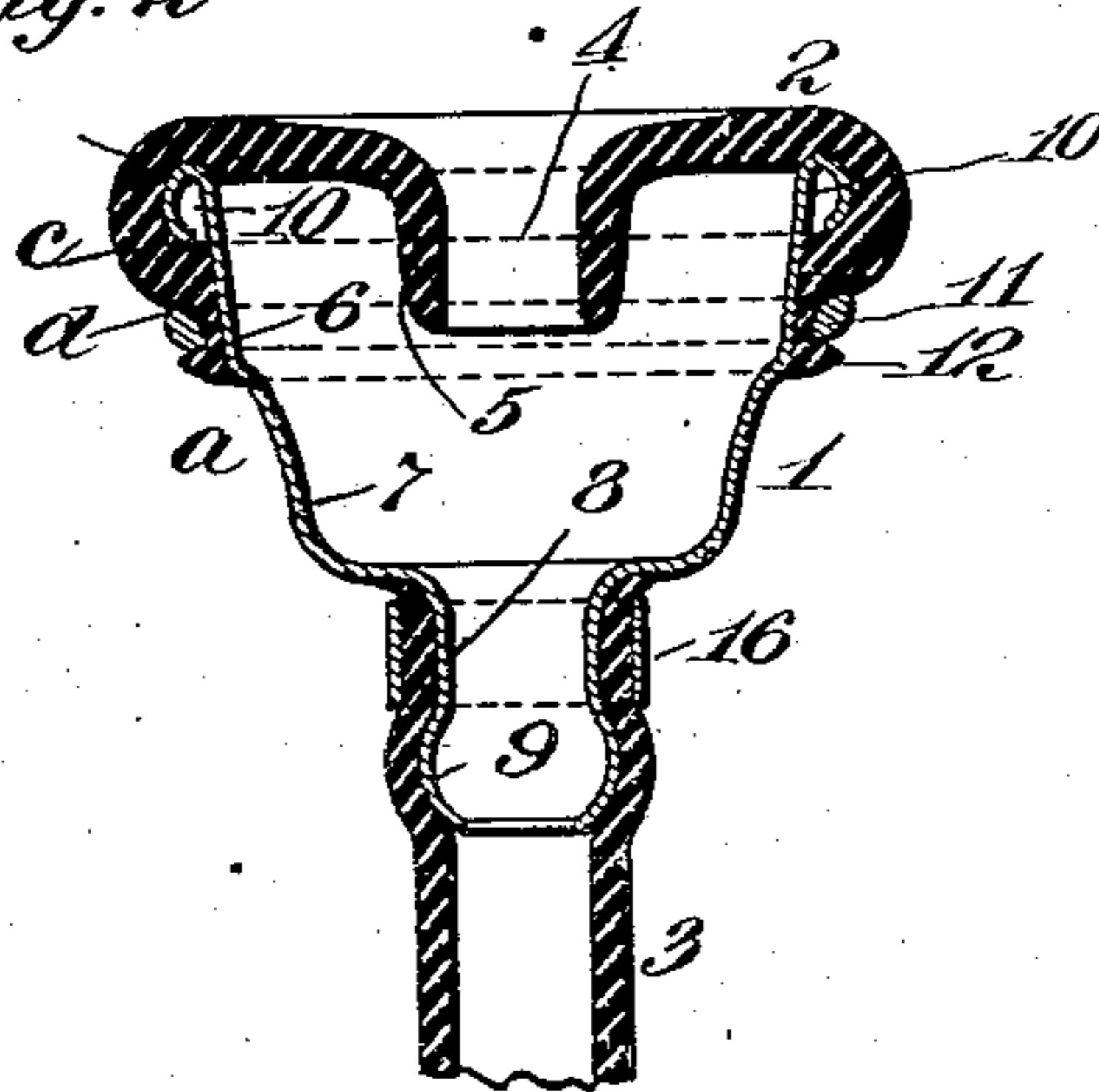


Fig. 3

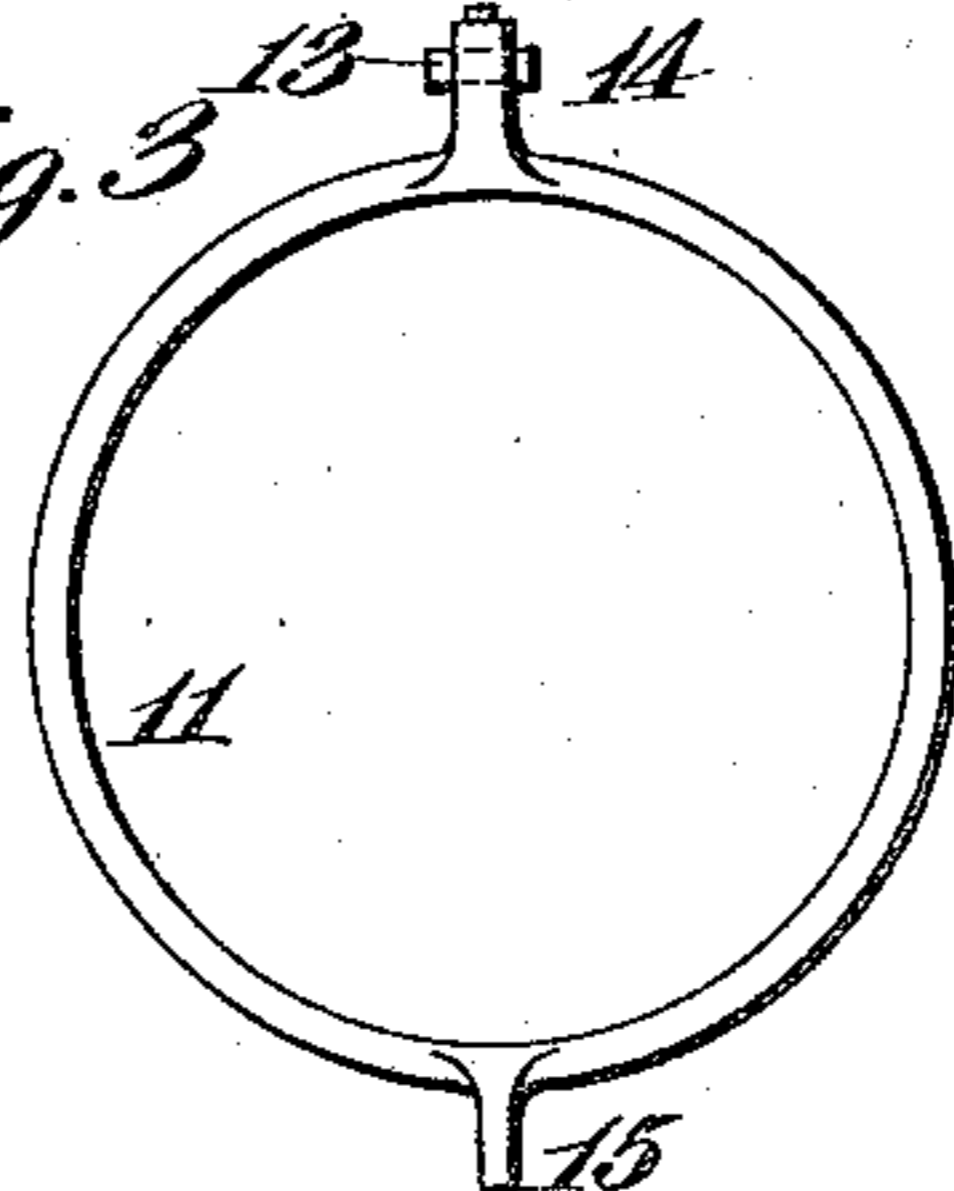


Fig. 4

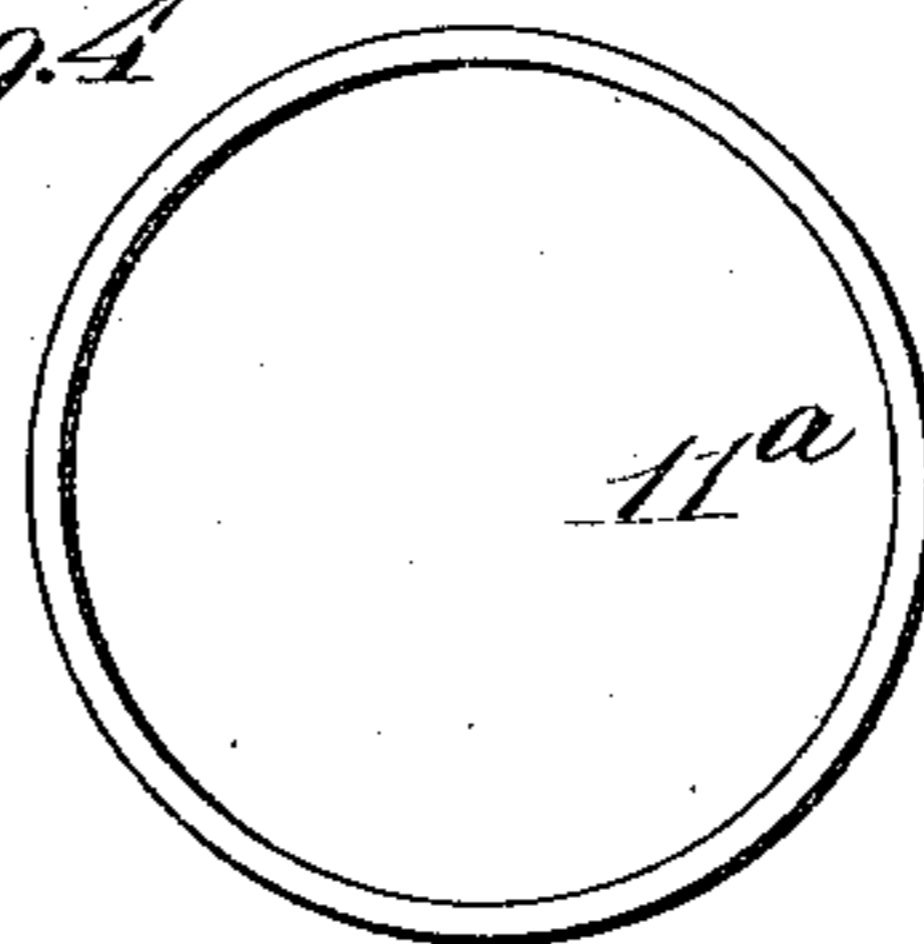
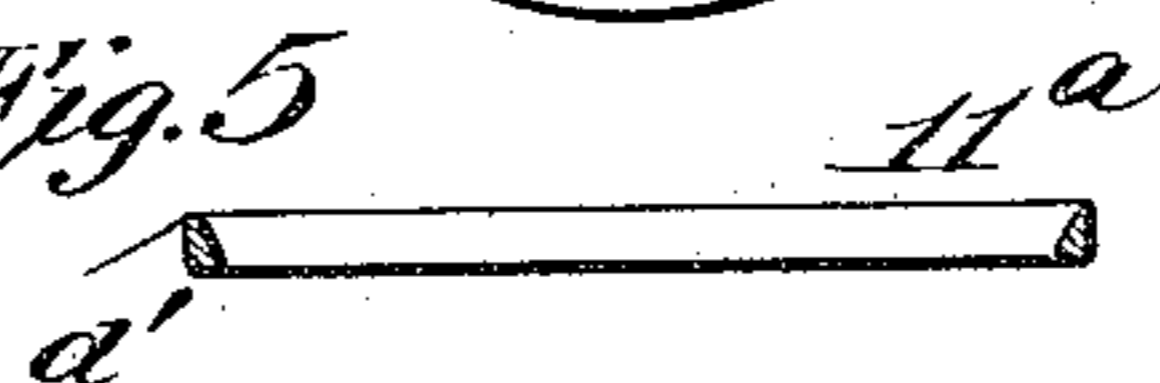


Fig. 5



Witnesses:

Jas F. Coleman
John L. Letcher

Inventor

Charles Nelson
By [Signature]

Attorneys.

UNITED STATES PATENT OFFICE.

CHARLES NELSON, OF NEW YORK, N. Y., ASSIGNOR TO S. STERNAU & CO., OF NEW YORK, N. Y., A COPARTNERSHIP.

COUPLING.

No. 924,368.

Specification of Letters Patent.

Patented June 8, 1909.

Application filed October 31, 1908. Serial No. 460,384.

To all whom it may concern:

Be it known that I, CHARLES NELSON, a subject of the King of Sweden, residing in the borough of Brooklyn, city of New York, State of New York, have invented a certain new and useful Coupling, of which the following is a description.

The object I have in view is the production of a coupling for a bath spray or analogous structure which may be attached to faucets of various sizes and shapes, and which will not be blown off by the pressure of water.

A further object is to reduce the cost of the coupling, and increase its durability and make it possible to readily replace certain parts in making repairs.

These and further objects will appear from the following specification and accompanying drawings, considered together or separately.

In the drawings: Figure 1 is a front elevation of a faucet and a coupling embodying my invention applied thereto. Fig. 2 is a sectional view of a coupling embodying my invention. Fig. 3 is a plan view of one form of ring used in connection with the coupling. Fig. 4 is a plan view of a modified form of ring and Fig. 5 is a section through the ring illustrated in Fig. 4.

In all of the views like parts are designated by the same reference characters.

The coupling *a* comprises a rigid, hollow body member 1, which is best made of sheet metal, and a yielding elastic top member 2, best made of soft rubber. To the member 1 is attached a flexible tube 3, preferably made of soft rubber. The yielding elastic top member 2 is provided with a central opening 4 which is adapted to go around the spout *b* of the spigot or cock, shown in Fig. 1. The central opening 4 is formed within a neck 5. The walls of this neck taper toward the lower open end, as shown in Fig. 2, and the wall of the central opening 4 is connected with the top along curved lines, as shown.

The member 1 is provided with a flaring top portion 6, a constricted middle portion 7, and a neck 8. The lower end of the neck has an enlargement 9 made upon curved lines, as shown. The upper edge of the flaring top portion 6 is turned over, forming a flange 10. The yielding elastic top member 2 has a portion *c*, which extends over the flange 10 and engages with the flaring top

portion 6 below such flange. Below the flange 10 is a ring 11. Below the ring the rubber extends downward and outward forming an annular flange 12. The cross section of the ring is illustrated in Fig. 2 where it appears that the inner wall is inclined producing a tapering opening and an edge *d*. The ring is placed around the top member above the annular flange 12, and lies between such flange and the flange 10. This ring will firmly hold the top member in place on the member 1, owing to the coöperation of the tapering inner wall of the ring, the edge *d*, the flaring top portion 6 of the body member and the flange 10. The top member may be readily removed by first removing the ring 11, by slipping it over the flange 12, which flange may be readily distorted to permit this. The portion *c* of the top member is then readily removed from engagement with the flange 10.

According to one embodiment of my invention, the ring 11 carries a chain 13, which chain is adapted to be looped around the spout *b*. One end of the chain is permanently attached to the ring 11 at 14, and another portion of the chain is temporarily attached to the ring by slipping a link over a pin 15, such pin being carried by the ring 11. The weight of the chain will bear against the spout and hold the coupling in place. The coupling may be adapted to fit a spout of different size by connecting a different link of the chain 13 with the pin. I make no claim to this chain broadly in this application for patent, as the same is disclosed in a co-pending application for patent filed by Albert N. Lattin and myself on March 13, 1907, Serial No. 362,245. I do, however, make a claim to the combination of this chain and the ring 11 and the elastic top member 2, for the reason that such chain exerting stress in the direction opposite to the water pressure tends to more firmly seat the rubber in place on the hollow body member 1.

Figs. 4 and 5 illustrate a ring 11^a without the chain. This ring may be conveniently made of a length of metal tube. The inner wall is tapered as shown so as to produce an edge *d'*, similar to the edge *d* of the ring 11.

Another portion of my invention relates to the attachment of the tube 3 to the hollow

body member 1. This tube is placed around the enlargement 9 and its inner end is secured in place by a ring or band 16. The band is used in place of the former wire which, heretofore, so far as I am aware, has been invariably used for this purpose. The band may be made of a length of metal tube and may be finished by nickel plating. The internal diameter of the band is less than the external diameter of that portion of the tube 3, which lies outside of the enlargement 9. This band forms a very efficient means for holding the tube in place and yet permits the ready removal of the tube, which is accomplished by moving the band away from the enlargement 9 in the direction toward the body member 1 and holding it in that position while the tube 3 is removed by a rectilinear movement.

In accordance with the provisions of the patent statutes, I have described the principle of my invention, together with the apparatus which I now consider to represent the best embodiment thereof; but I desire to have it understood that the apparatus shown is merely illustrative and that the invention can be carried out in other ways.

Having now described my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. A coupling having a hollow body member, with a flaring top portion, and a flange at its edge in combination with an elastic

top member, with a portion which extends over the flange, and comes into engagement with the flaring top portion below such flange, and a ring between the lower edge of the extending portion and the flange.

2. A coupling having a hollow body member, with a flaring top portion, and a flange at its edge in combination with an elastic top member, with a portion which extends over the flange, and comes into engagement with the flaring top portion below such flange, and a ring between the lower edge of the extending portion and the flange, the said ring having a tapering bore.

3. A coupling having a hollow body member, with a flaring top portion, and a flange at its edge in combination with an elastic top member, with a portion which extends over the flange, and comes into engagement with the flaring top portion below such flange, and a ring between the lower edge of the extending portion and the flange, the said ring having a tapering bore, and a chain permanently attached to the ring at one end, and adapted to be temporarily secured at another place to the ring by means of a pin on the latter.

This specification signed and witnessed this 29th day of October, 1908.

CHARLES NELSON.

Witnesses:

ROBT. E. TAYLOR,
G. L. MILLER.