UNITED STATES PATENT OFFICE.

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ATTACHING-SOCKET FOR GAS-TUBING.


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To all whom it may concern:

Be it known that I, RAYMOND C. LEWIS, a citizen of the United States, and a resident of the city of New York, borough of Brooklyn, in the county of Kings and State of New York, have invented a new and improved Attaching-Socket for Tubing, of which the following is a full, clear, and exact description.

The invention relates to tubing and its object is to provide a new and improved attaching socket for tubing arranged to prevent the elastic rubber tip of the attaching socket from accidentally slipping or being pulled off from the gas nipple or other connection thus preventing escape of the gas into the room and asphyxiation of its inmates. Another object is to reinforce the elastic tubular tip to prevent the same from becoming detached from the tubing.

With these and other objects in view, the invention consists of certain novel features of construction, as hereinafter shown and described and then specifically pointed out in the claims.

A practical embodiment of the invention is represented in the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in the views.

Figure 1 is a side elevation of the attaching sockets for tubing applied to a gas nipple;

Fig. 2 is an end elevation of the attaching socket and its armor;

Fig. 3 is a longitudinal central section of the same on the line 3—3 of Fig. 2.

The end of the flexible or other tubing 10 is provided with an elastic tubular tip 11 held in place by the usual ferrule 12 or other suitable means. The elastic tubular tip 11 is surrounded or incased in an armor 13, preferably made of wire strands braided together to form an open mesh wire netting snugly fitting the exterior surface of the tip 11. The armor 13 is preferably extended around the metallic ferrule 12 and onto the tubing so as to securely hold the ferrule 12 in position on the end of the tubing 10.

The forward end of the armor 13 is bent over onto the end of the tip 11 and its strands are looped around a ring 14 held concentrically on the end of the tip 11, as plainly shown in Fig. 2. In order to securely hold the armor 13 in position on the ferrule 12 use is made of a binding or wire wrapping 15 passing around the armor 13 at the ferrule, as plainly shown in Fig. 1. A similar binding or wire wrapping 16 extends around the rear end of the armor 13 at the tubing 10 to securely hold the rear end of the armor in place on the tubing 10.

It will be noticed that when the elastic tip 11 is pushed in position on the gas nipple or other connection then the rubber or other elastic material of which the tip is made is expanded in an outward direction thus causing the armor to contract in length and expand in diameter to allow of readily attaching the tip to the nipple. The elasticity of the tip 11 and armor 13 after being pushed in position on the nipple 17 places the tip and armor under tension whereby the nipple 17 is firmly gripped and the tubing held in place against accidental detachment.

It is understood that the nipple or other connection 17 has its exterior diameter somewhat larger than the interior diameter of the elastic tip 11 so that the latter expands when being pushed in position on the nipple 17. It will also be noticed that the tip 11 on being pushed in position on the nipple is compressed lengthwise and thus made shorter. Now when an outward pull is exerted on the tubing 10 in the direction of the length thereof then a like pull is exerted on the tip 11 and the armor 13 in which the tip is incased thereby extending the netting 13 in length and contracting it diametrically whereby the tip is compressed and its grip tightened on the nipple thereby preventing accidental detachment of the socket from the nipple 17. It is understood that the harder the pull on the tubing 10 the tighter the tip 11 is compressed by the netting 13 thus insuring a firm hold of the tip 11 on the nipple 14. In a like manner the extension of the armor contracts around the tubing thereby holding the tip in position on the tubing. In practice, the netting 13 is preferably made of flat strands of wire braided around the tube 11 to produce an open mesh netting or incasing armor for the tip 11, ferrule 12 and tube 10.

When it is desired to detach the socket from the nipple 14, it is necessary to press against the outer end of the tip 11 and in an outward direction relative to the nipple 14 to slip the tip off the nipple.

From the foregoing it will be seen that by the arrangement described the elastic tubular tip 11 of the attaching socket of the tub-
ing 10 is not liable to accidentally slip off or be pulled off the gas nipple 14 or detached from the tubing 10, thus preventing escape of gas into the room and asphyxiation of its inmates.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. An attaching socket for tubing, comprising a tubular elastic tip, and an armor exteriorly fitting on the said tip and subjected to tension on expanding the tip on placing the latter in position on a connection.

2. An attaching socket for tubing, comprising a tubular elastic tip, and an open mesh wire netting exteriorly incasing the said tip and expanding the tip on placing the latter in position on a connection.

3. An attaching socket for tubing, comprising a tubular elastic tip and an open mesh wire netting exteriorly incasing the said tip and placed under tension on expanding the tip on placing the latter in position on a connection, the said wire netting extending at its rear end onto the tubing.

4. An attaching socket for tubing, comprising a tubular elastic tip and an open mesh wire netting exteriorly incasing the said tip and placed under tension on expanding the tip on placing the latter in position on a connection, the said wire netting extending at its rear end onto the tubing, and a binding around the netting at the tubing.

5. An attaching socket for tubing, comprising a tubular elastic tip, and an armor exteriorly fitting on the said tip and subjected to tension on expanding the tip on placing the latter in position on a connection, and a ring on the end of the tip and to which the armor is anchored.

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D.C."