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J. M. MURDOCK

PIPE NECK

Filed May 21, 1925

Fig. 1.

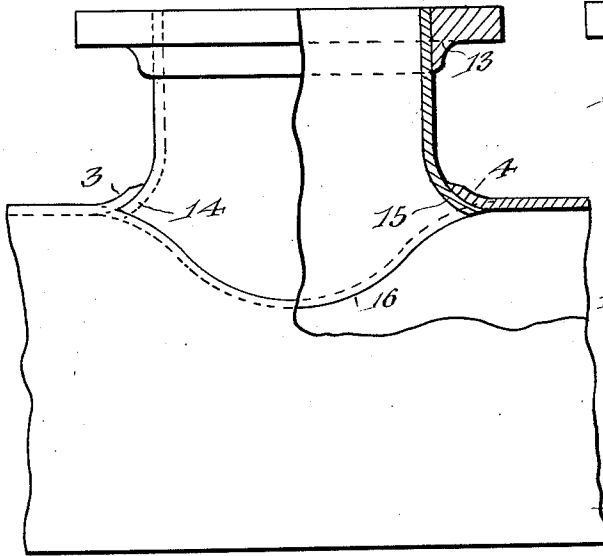


Fig. 2.

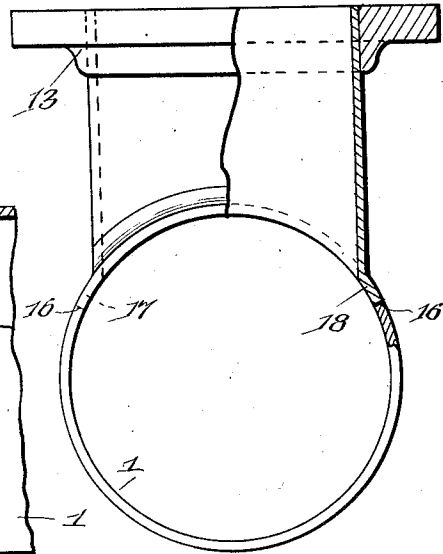


Fig. 3.

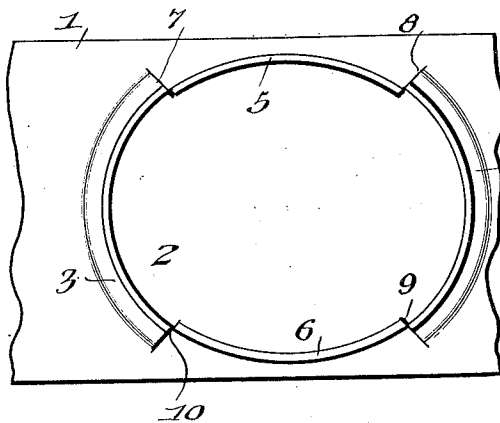
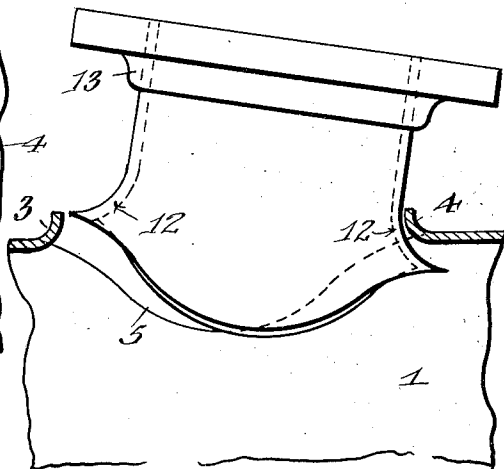


Fig. 4.



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PIPE NECK.

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This invention relates to a welded, reinforced, flared pipe neck, and has for its object to provide, in a manner as hereinafter set forth, a pipe neck to overcome the tearing of the neck away from the pipe or the tend to push the neck into the pipe caused by excessive strains due to expansions, contractions and weight of the piping, etc.

A further object of the invention is to provide, in a manner as hereinafter set forth, a connection between a pipe neck and a pipe of curvilinear contour instead of the sharp corners of the straight style welded necks universally used at the present time, whereby friction is reduced to a minimum.

Further objects of the invention are to provide, in a manner as hereinafter set forth, a welded, reinforced, flared pipe neck, which is simple in its construction, strong, durable, thoroughly efficient and comparatively inexpensive to set up.

With the foregoing and other objects in view, the invention consists of the novel construction, combination and arrangement of parts, as hereinafter more specifically described and illustrated in the accompanying drawings, wherein is shown an embodiment of the invention, but it is to be understood that changes, variations and modifications can be resorted to which come within the scope of the claims hereunto appended.

In the drawings wherein like reference characters denote corresponding parts throughout the several views:—

Figure 1 is a side elevation, partly in section, illustrating a welded, reinforced, flared pipe neck, in accordance with this invention, joined to the pipe.

Figure 2 is an end elevation, partly in section, of the pipe neck and pipe, the former being secured to the latter.

Figure 3 is a top plan view illustrating the pipe.

Figure 4 is a sectional elevation illustrating the insertion of the pipe neck into the pipe and prior to the securing of the former to the latter.

Referring to the drawings in detail, 1 denotes a pipe provided with an oval shaped opening 2, a pair of oppositely extending and diametrically opposed arcuate flanges 3, 4, and a pair of oppositely extending diametrically opposed arcuate rests 5, 6 of same length as the length of the flanges. The pipe 1 is formed with equidistant radially

disposed slits 7, 8, 9 and 10 so that the flanges 3, 4 can be curved to project above the rests 5, 6. The slits are of the same length. The flanges are alternately disposed with respect to the rests.

The neck is indicated at 11 and formed with a flared base 12, and secured to the outer end of the neck 11 is a flanged reinforcing collar 13. The end portions of the base are upon a greater flare than the side portions thereof.

The flared base 12 of the neck is extended under the flanges 3, 4 and is mounted against the rests 5, 6. The portions of the neck which extend under the flanges 3, 4 are indicated at 14, 15 respectively, Figure 1. After the neck has been inserted under the flanges, these latter are heated and hammered into shape so as to form a close contact with the flared base of the neck. At the points indicated 16, Figure 2, the neck is welded to the pipe in the usual manner.

From the construction illustrated and described, one-half of the base of the neck is flared out and is positioned inside the curved flanges, and the other half of the base of the neck also being flared out abuts against the wall of the pipe, as shown in Figure 2. The flared portions at the ends of the base of the neck, indicated at 14, 15, are upon a greater flare than the flared portions 17, 18 at the sides thereof. The bottom end faces of the side portions 17, 18 are mounted in abutting relation on and secured to the lengthwise end faces of the rests 5, 6. The side portions 17, 18 of the base, when in abutting relation with respect to the rests 5, 6 form a continuation of the arc of the pipe body, so that when the pipe neck is secured in position, the weight thereof will not act to throw the neck off center or cause a slippage thereof into the pipe body below the rests, as the weight of the pipe neck is distributed directly throughout and in the arc of the pipe body.

Setting up a pipe neck with respect to a pipe, in the manner as hereinbefore referred to, reduces to a minimum liability of the tearing away of the neck from the pipe or the tendency to push the neck into the pipe, due to excessive strains, expansions, contractions and weight of the piping, and, therefore, it is thought that the many advantages of a welded, reinforced, flared neck, in accordance with this invention, can

be readily understood, and although the preferred embodiment of the invention is as illustrated and described, yet it is to be understood that changes in the details of construction can be had which will fall within the scope of the invention as claimed.

What I claim is:—

1. In combination a pipe body formed with an opening and with spaced slits extending inwardly from the wall of said opening, the material freed between alternate pairs of slits extended upwardly and angularly disposed with respect to the material freed between the other pairs of slits to provide a pair of opposed arcuate flanges, the material between the said other pairs of slits forming a pair of oppositely disposed arcuate rests, a pipe neck formed with a flared base conforming in contour to the shape of said opening, said flared base having its end portions upon a greater flare than its side portions, said end portions overlapped by and having the outer periphery thereof secured to the inner faces of said flanges, and said side portions forming a continuation of the arc of the pipe body and having the bottom end faces thereof mounted in abutting relation on and secured to the lengthwise end faces of said rests.

2. In combination, a pipe body formed with a lengthwise extending oval shaped opening and with a series of slits extending inwardly from the edge of the opening, each of said slits positioned at an end of each side of the opening, the material freed by the slits at the ends of the opening extended upwardly and angularly disposed with respect to the freed material at the sides of the opening to provide a pair of diametrically opposed upstanding arcuate flanges, the material freed at the sides of the opening having the lengthwise edges thereof forming a pair of oppositely disposed arcuate rests, a pipe neck having a flared base conforming in contour to the shape of said opening, said base having its end portions upon a greater flare than its side portions, the end portions of said base having the outer periphery thereof overlapped by and secured to the inner faces of said flanges, and said side portions forming a continuation of the arc of the pipe body and having the bottom end faces thereof mounted in abutting relation on and secured to the lengthwise end faces of said rests.

In testimony whereof, I affix my signature hereto.

JAMES M. MURDOCK.