Jan. 22, 1952 J. M. COYNER 2,583,041

PIPE JOINT

Filed April 22, 1949

Fig. 1

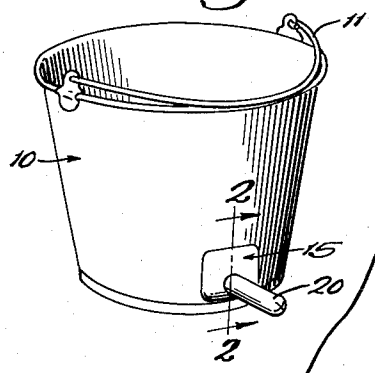
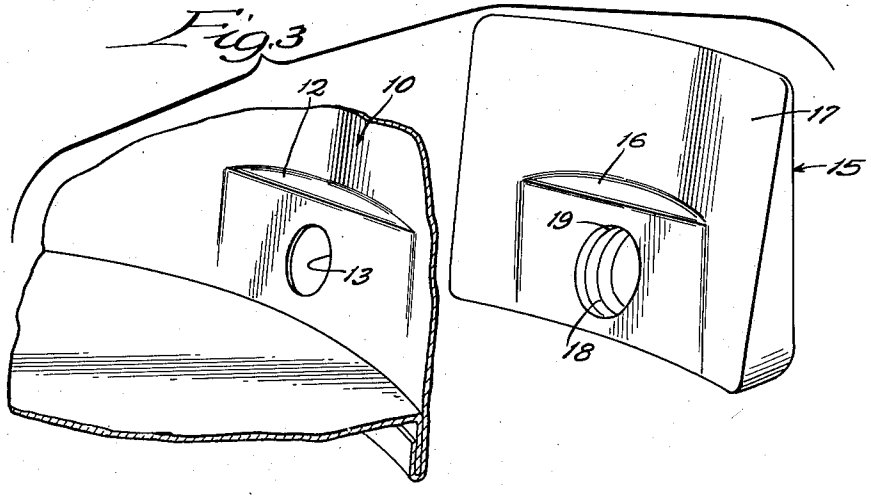


Fig. 2

Fig. 3



INVENTOR:
James M. Coyner,

BY Dawson, Orrick, Booth & Spangenberg,
ATTORNEYS.

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PIPE JOINT

James M. Coyner, Madison, Wis.

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4 Claims. (Cl. 285—30)

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This invention relates to a feeder pail and is particularly useful as a calf feeder pail, and for like purposes.

An object of the present invention is to provide a feeder pail which may be formed of thinner metal than is normally used while providing great strength at the point where the nipple is attached and where blows are usually applied to the pail by the calf in butting the pail. Yet another object is to provide a structure in which the nipple is so attached that the pail is drained to the very bottom, while at the same time providing a buffer about the area to which the nipple is attached. A still further object is to provide a feeder pail in which soldering is eliminated, while at the same time providing an innerlocked, welded, grooved ferrule plate which provides a grip for the end of the nipple. Other specific objects and advantages will appear as the specification proceeds.

The invention is illustrated in a specific embodiment, by the accompanying drawing, in which—

Figure 1 is a perspective view of a feeder pail embodying my invention;

Fig. 2, an enlarged broken sectional view, the section being taken as indicated at line 2 of Fig. 1; and

Fig. 3, a perspective view of the interior of the feeder pail and of the inner side of the ferrule plate, the parts being shown in detached relation.

In the illustration given, 10 designates a pail which may be of any suitable construction and which may be provided with a bail 11. The lower portion of the pail is pressed inwardly, as indicated in Figs. 1 and 3, to provide an upper shoulder 12. The indented portion of the pail is provided with an aperture 13 and, preferably, the edges of the metal about the aperture are turned outwardly to form a rim 14, as shown more clearly in Fig. 2.

I provide an anchor or ferrule plate 15 with a shoulder 16 on the inner side thereof, as shown more clearly in Fig. 3, and of the contour illustrated in Fig. 3, so that when the plate 15 is applied to the indented portion of the pail, the shoulder 16 fits against the shoulder 12 provided by the pail, and the upper apron portion 17 of the plate provides a guard lying against a wide portion of the pail thereabove. Thus, any pressure exerted against the plate 15 is distributed over a relatively wide area of the pail metal.

The ferrule or anchor plate 15 is preferably provided with a grooved opening 18 aligned with the opening 13 of the pail 10, and the inner portion of the plate is provided with a grooved por-

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tion 19 adapted to receive the rim portion 14 of pail 10, as shown more clearly in Fig. 2.

A nipple 20 of the usual type provided with an outer opening, etc., is placed within the openings 13 and 18, as shown more clearly in Fig. 2. The nipple is preferably smooth and it grips the grooves 22 of the plate 15.

The plate 15 is preferably secured to the pail 10 by electric spot welding and by rolling the rim 14 within the groove 19 of the plate 15. The spot welding may be at the points 23, or at any other selected points.

In the construction of the pail, I prefer first to form the indentation, as above described, with the shoulder 12 and to form the opening 13 with the outwardly spun rim 14. The plate 15, which has been formed in the shape illustrated best in Fig. 3, is then placed in position with the shoulder 16 engaging the shoulder 12 of the pail, and the plate is then spot welded as already described. The nipple 20 is next drawn into position from the inside so that the lower point of the nipple is aligned with the bottom of the pail, as shown best in Fig. 2.

In the operation, the pail may be filled with milk and suspended in a position so that the calf, etc. may suck upon the nipple and receive a supply of milk. While feeding, the calf repeatedly butts its head against the pail and the force here is taken by the anchor or ferrule plate 15, so that the stress is distributed over a wide area of the metal. At the same time, there is no projecting metal tube or other part which will injure the head of the calf. When the nipple is removed for cleaning, it may be readily withdrawn from the inside of the pail.

The new structure is extremely sturdy, while at the same time enabling thinner metal to be used in the fabrication of the pail. At the same time, an extremely sturdy and reinforcing structure is provided about the nipple 20 by the ferrule or anchor plate. Liquid may be drained from the very bottom of the pail and quick substitution of nipples can be effected without the use of any instrument or without requiring anything more than the withdrawal or insertion from the inside. If desired, the nipple may be equipped with the usual check valve.

While in the foregoing specification I have set forth a specific structure in considerable detail for the purpose of illustrating one embodiment of the invention, it will be understood that such details of structure may be varied widely by those skilled in the art without departing from the spirit of my invention.

I claim:

1. A feeder pail having a lower portion thereof adjacent the bottom indented and having an aperture extending therethrough, said indentation providing an external horizontal shoulder, an anchor plate having a portion thereof received within said indentation and secured to said pail about said indentation, said anchor plate having a shoulder abutting the lower side of said pail shoulder, said plate having a grooved-equipped passage therethrough aligned with the opening in said pail, and a resilient nipple having an inner end engaging a groove of said plate.

2. A feeder pail, comprising a pail having a lower portion thereof on one side indented to provide a shoulder and having an opening through said indented portion, a ferrule plate having a shoulder interlockingly engaging the underside of the shoulder of said pail and having an apron extending beyond said shoulder, said ferrule plate having a groove-equipped passage therethrough aligned with the opening in said pail, and a resilient nipple having an inner portion engaging a groove of said plate.

3. A feeder pail, comprising a metal pail having the lower edge portion thereof adjacent the bottom indented and provided with an opening aligned with the bottom of the pail, the metal about said opening being spun outwardly, a ferrule plate having a groove-equipped passage aligned with the opening of said pail and having an inner groove thereof receiving the outwardly spun portion of said pail, said plate having a portion thereof snugly received within said indentation and outwardly-extending portions extending beyond said indentation, said plate having a portion thereof confined by said recess against upward movement, said plate being welded to said pail, and a resilient nipple having an inner portion gripping the grooves of said plate and having the lower portion of said nipple substantially aligned with the inner bottom portion of said pail.

4. A feeder pail, comprising a relatively thin metal pail having a bottom portion thereof indented and having an opening extending through said indentation, a ferrule plate welded to said pail and having a shoulder portion thereof interlockingly engaging a shoulder provided by the indentation in said pail, said plate having a ridge-equipped opening therethrough aligned with the opening in said pail and having a tapering apron portion extending upwardly in contact with the side wall of the pail, and a resilient nipple having an inner end gripping a ridge of said ferrule plate.

JAMES M. COYNER.

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