Sept. 19, 1950 H. J. LARSON 2,522,757

CALF FEEDER

Filed May 3, 1947

FIG. 2

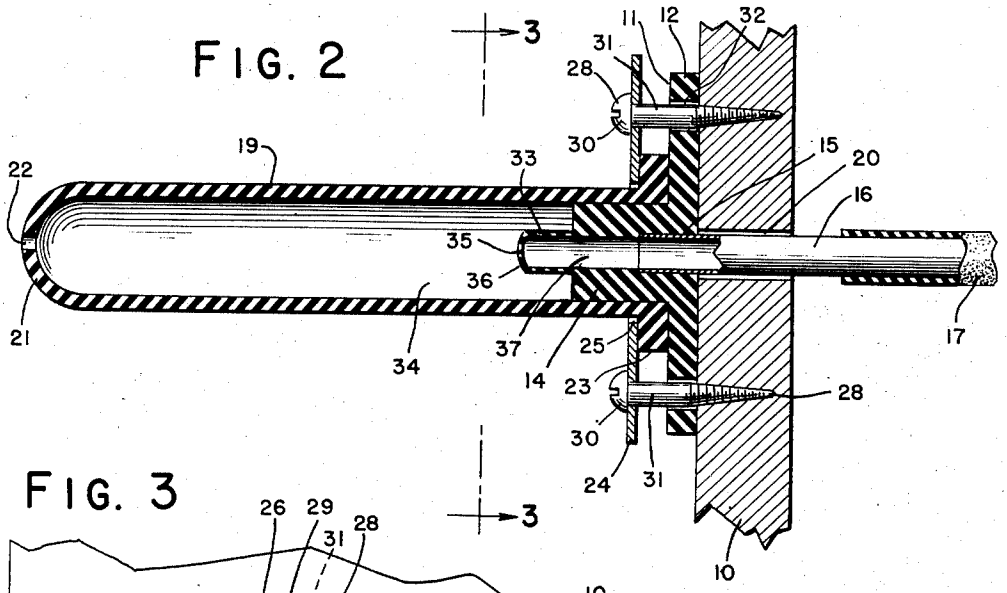


FIG. 3

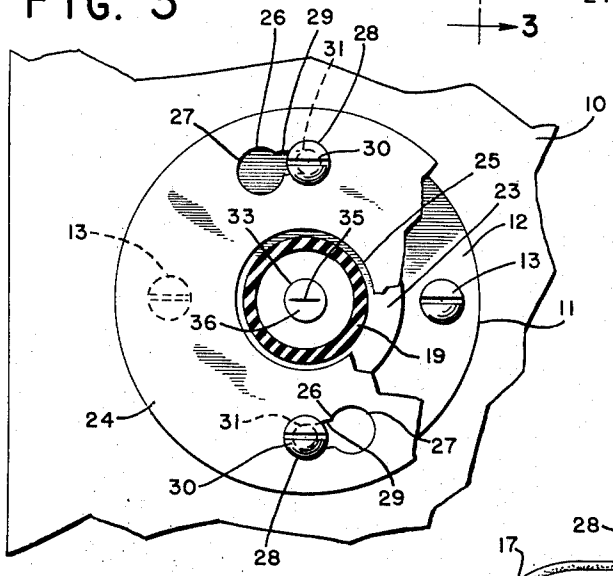
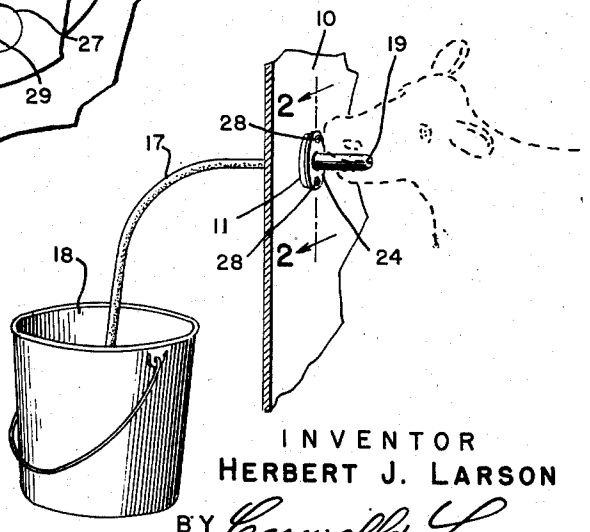


FIG. 1



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Patented Sept. 19, 1950

2,522,757

UNITED STATES PATENT OFFICE

2,522,757

CALF FEEDER

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Application May 3, 1947, Serial No. 745,852

8 Claims. (Cl. 119—71)

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My invention relates to calf feeders and has for an object to provide a device whereby a calf may be fed liquids from a pail in a manner simulating natural feeding.

Another object of the invention resides in providing a construction which may be readily disassembled for the purpose of cleaning.

An object of the invention resides in providing a mounting having a neck thereon and in further providing a nipple adapted to be applied over said neck and attached to said mounting.

A feature of the invention resides in providing clamping means for attaching the nipple to said mounting.

An object of the invention resides in constructing the mounting with a base and the nipple with a flange adapted to overlie the base and with which the clamping means cooperate.

A still further object of the invention resides in constructing the clamping means with an annular plate extending about the nipple and adapted to engage the flange for urging the same against said base.

A feature of the invention resides in constructing said plate with key hole slots and in further providing headed members fixed relative to the mounting for engagement with said plate at the locality of said key hole slots to hold the plate in position.

Another object of the invention resides in providing a tube connected with said neck and in further providing a valve carried by said mounting and controlling the flow between said tube and the interior of said nipple.

A still further object of the invention resides in providing a tubule extending outwardly from said neck and into said nipple and in which said valve is formed.

Other objects of the invention reside in the novel combination and arrangement of parts and in the details of construction hereinafter illustrated and/or described.

In the drawings:

Fig. 1 is a perspective view of a calf feeder illustrating an embodiment of my invention.

Fig. 2 is an elevational longitudinal sectional view of a portion of the structure shown in Fig. 1 taken on line 2—2 of Fig. 1 and drawn to a greater scale.

Fig. 3 is a cross sectional view taken on line 3—3 of Fig. 2.

My invention is preferably used in conjunction with a wall or other support and is arranged to project outwardly therefrom at about the proper elevation, so that a calf feeding from the same is positioned in a normal position such as assumed when feeding naturally from the mother

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cow. In the drawings, I have shown a portion of a wall 10 or other support and to which the apparatus of my invention is attached.

The invention proper consists of a mounting 11 which is constructed of rubber or some other similar suitable material. This mounting has a base 12 which is adapted to overlie the surface of the support 10 and which is secured to the said support by means of two screws 13 which extend through suitable apertures in the base and are screwed into the support. The base 12 has issuing outwardly from it a neck 14 which is formed in proximity to the base 12 with a socket 15. This socket receives a tubular connector 16 which has applied to it one end of a flexible tube 17. The other end of the tube 17 is inserted into a pail 18 as is shown in Fig. 1 and in which the liquid to be fed to the calf is placed.

Attached to the mounting 11 is a nipple 19 which is constructed of rubber or some other similar suitable flexible material. This nipple has a chamber 34 within the same and has a rounded closed wall 21 at one end which is formed in the center of the same with a discharge opening 22. The other end of said nipple is open and it is adapted to receive the neck 14 of the mounting 11 which extends into the chamber 34. A flange 23 formed on this end of the nipple encircles the said neck 14 and is adapted to rest upon the base 12.

For the purpose of holding the nipple 19 attached to the mounting 11 an annular clamp plate 24 is employed. This plate has an opening 25 in the center of the same which receives the nipple 19. Outwardly of the said opening are two key hole slots 26 which have enlarged portions 27 of dimensions sufficient to receive the heads 30 of screws 28. Said slots further have reduced portions 29 which receive the shanks 31 of said screws. Screws 28 extend through holes 32 in the base 12 of mounting 11 and are screwed into the support 10. These screws extend outwardly beyond the base 12, a distance sufficient so that the plate 24 may be applied to the said screw and rotated a fraction of a turn to engage the heads 30 of said screws and hold the nipple 19 applied to the mounting 11.

The inner end of the neck 14 at the mounting 11 is provided with a tubule 33 which extends inwardly into the chamber 34 within the nipple 19. This tubule is constructed of rubber and is preferably formed as part of the mounting 11. The neck 14 has a passageway 37 which communicates with the bore of the tubule 33 and the tubular connector 16. The end 35 of the said tubule has a small slit 33 formed in the same as

best shown in Fig. 3. This slit converts the said tubule into a check valve which opens to allow liquid to pass into the chamber 34 but restrains the flow of liquid from said chamber back into the tube 17 and pail 18.

In the use of the invention the nipple 19 is applied to the neck 14 of mounting 11 by directing the flange 23 over the same. The clamping plate 24 is then applied and the same directed towards the said mounting until the heads 30 of the screws 31 pass through the enlarged portions 27 of the key hole slots 26. The said plate is then pressed toward the support 10 and given a short rotational movement which brings the portions of the said plate adjacent the reduced portions 29 of slots 27 under the heads 30 of the said screws. If the screws are so tightened that the flange 23 is required to give a little in the application of the plate 24 to the same, the parts become securely clamped together with the flange 23 forming a fluidtight connection with the base 12 and mounting 11. The tube 17 and connector 16 are next connected to the mounting 11 by inserting the connector 16 through a hole 20 in support 10 opposite socket 15 and into said socket in the mounting 11. The other end of the hose is then placed in the pail 18 which is filled with the liquid food to be fed to the calf. The calf upon sucking on the nipple 19 creates a vacuum in the chamber 34 which opens valve 36 and draws the liquid from the pail 18 upwardly into the interior of the tubule 33 into the chamber 34. As the calf continues to suck on the nipple 19 the liquid passes through the discharge opening 22 in the nipple 19 and into the mouth of the calf. By means of the valve 36 liquid is prevented from backing up through the tubule 33 and tube 17 and into the pail 18 thereby preventing the milk or other liquid in the pail from becoming contaminated with saliva from the calf.

When the feeding is completed, clamp plate 24 is removed and the nipple 19 withdrawn from the mounting 11. The tube 17 is then raised upwardly and a small funnel connected to the outermost end of the same. Water is then poured into the tube and the interior of the tube and mounting 11 and tubule 33 are completely cleaned. The connector 16 may then be removed and after the nipple 19 has been washed the parts are ready for further use.

The advantages of the invention are manifest. The device is rigidly attached to the support so that the calf will be unable to dislodge or remove the device or in any other manner render the same inoperative. The nipple may be disposed at a height such that the calf is in a natural position when feeding thereby causing the salivary glands of the calf to function in the normal manner. The parts may be readily disassembled, and may be easily washed. If desired, the screws 13 may be omitted in which case the plate 24 serves to attach the mounting 11 to the support 10 as well as to attach the nipple 19 to the mounting. The valve used with the invention is extremely simple and may be readily cleaned. The device can be constructed at a nominal cost and is extremely sanitary in use.

Changes in the specific form of my invention, as herein described may be made within the scope of what is claimed without departing from the spirit of my invention.

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

1. A calf feeder comprising a mounting for attachment to a vertical wall and having a neck thereon, a nipple having a discharge opening at its outer end and adapted to be applied over said neck, a tube connected to said neck and extending away from said nipple, a tubule connected to and supported by said neck and extending into said nipple and communicating with said tube, and a valve at the end of said tubule controlling flow between said tube and the interior of said nipple.

2. A calf feeder comprising a mounting for attachment to a vertical wall and having a neck thereon, a nipple having a discharge opening at its outer end and adapted to be applied over said neck, a tube connected to said neck and extending away from said nipple, a tubule connected to and supported by said neck and extending into said nipple and communicating with said tube, said tubule being constructed of resilient material and normally close at its end, the end of said tubule being formed with a slit providing a valve controlling flow between said tube and the interior of said nipple.

3. A calf feeder comprising a mounting having a neck thereon, a nipple having a discharge opening at its outer end and adapted to be applied over said neck, a tube connected to said neck and adapted to discharge into said nipple, a flange on said nipple encircling said neck and constructed of resilient material, an annular plate encircling said nipple and engaging said flange, said plate having key hole slots therein and headed members fixed relative to said mounting and adapted to engage said annular plate at the locality of said key hole slots for clamping the plate against said flange, yieldingly urging said plate against said headed members to detachably hold said plate in position.

4. A calf feeder comprising a mounting having a neck thereon, a nipple having a discharge opening at its outer end and adapted to be applied over said neck, a tube connected to said neck and adapted to discharge into said nipple, a flange on said nipple encircling said neck, said flange being constructed of resilient material, an annular plate encircling said nipple and engaging said flange, said plate having key hole slots therein and headed members fixed relative to said mounting and engaging said plate at the locality of said key hole slots, said plate upon pressure against said flange being engageable with said headed members and the resiliency of said flange holding the plate in engagement with the flange and the nipple in fluid tight contact with said mounting.

5. A calf feeder comprising a mounting constructed of resilient material and having a flange with a neck extending outwardly therefrom, a nipple having a discharge opening at its outer end and adapted to be applied over said neck, a flange on said nipple encircling said neck and resting on the flange of said mounting, said flange being constructed of resilient material, an annular plate encircling said nipple and engaging the flange thereof, said plate having keyhole slots therein arranged in circular relation, and headed members fixed relative to said mounting and engaging said plate at the locality of said keyhole slots, said plate being yieldingly held into engagement with said headed members through the resiliency of both of said flanges and upon compressing said flanges and upon rotation being disengageable from said headed members.

6. A calf feeder comprising a mounting constructed of a resilient material and having a neck thereon, a nipple having a discharge opening at its outer end and adapted to be applied over said neck, said neck having a passageway therein, a tubule on said neck made in one piece therewith and extending outwardly therefrom and into said nipple, said tubule communicating with said passageway and having a check valve at its outer end, said neck having a socket at the outer end of said passageway and a tube detachably mounted in said socket and communicating with said passageway.

7. A calf feeder comprising a mounting constructed of resilient material and having a flange with a neck extending outwardly therefrom, a nipple having a discharge opening at its outer end and adapted to be applied over said neck, a flange on said nipple encircling said neck and resting on the flange of said mounting, said flange being constructed of resilient material, an annular plate encircling said nipple and engaging the flange thereof, and attaching means fixed relative to said mounting and engaging said plate, said plate being yieldingly held into engagement with said attaching means through the resiliency of both of said flanges, said attaching means and plate having cooperating parts adapted to become disengaged from one another upon relative movement therebetween.

8. A calf feeder comprising a mounting constructed of resilient material and having a neck thereon, a nipple having a discharge opening at its outer end and adapted to be applied over said neck, said neck having a passageway therein, a tubule on said neck made in one piece therewith and extending outwardly therefrom and into said nipple, said tubule communicating with said passageway and having a rounded end, said end having a slit therein forming a valve and a tube detachably connected to said neck and communicating with said passageway.

HERBERT J. LARSON.

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