May 25, 1937. W. H. CROSSLEY 2,081,292

MILK BOTTLE HOLDER

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Fig. 1

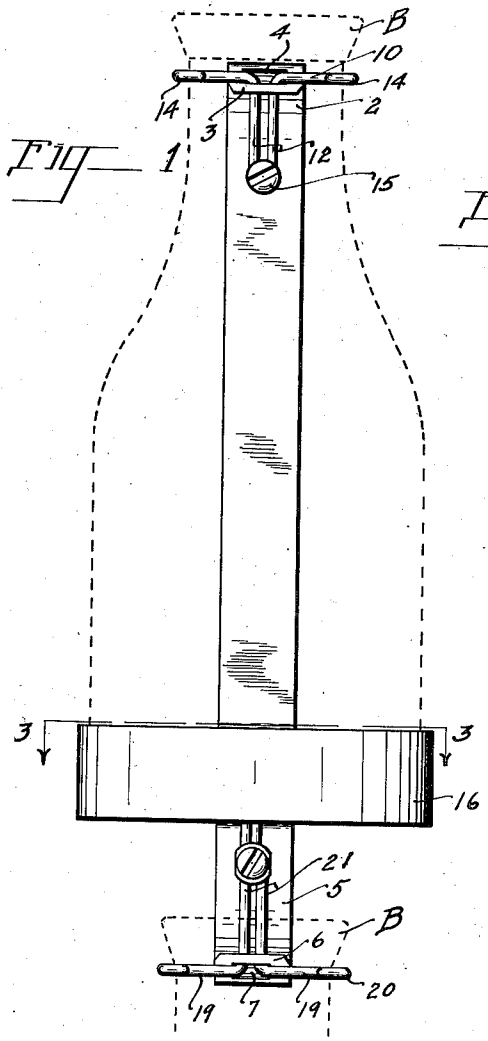

Fig. 2

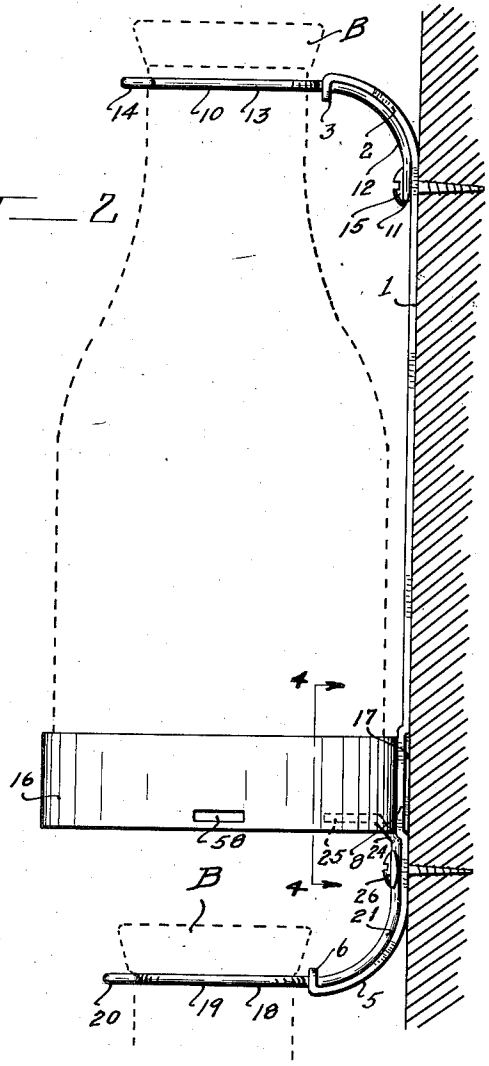

Fig. 3

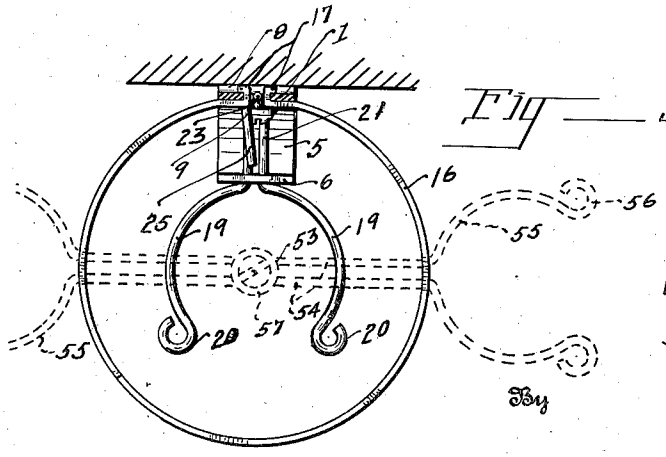

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Fig 4

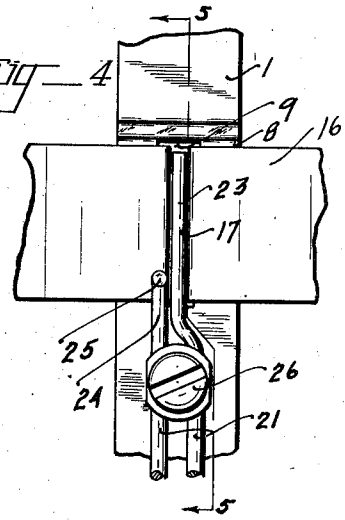

Fig 5

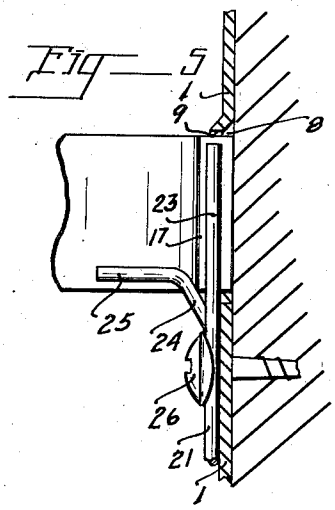

Fig 11

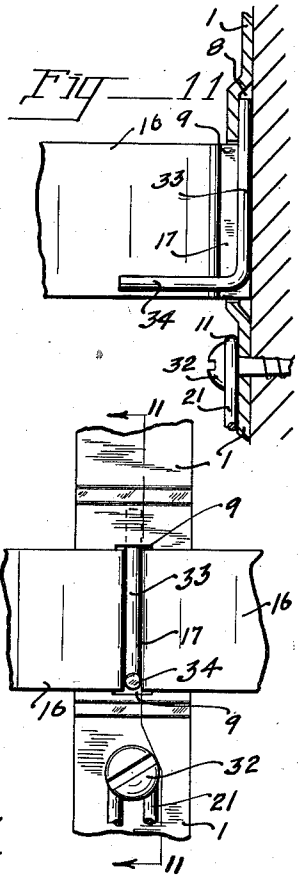

Fig 8

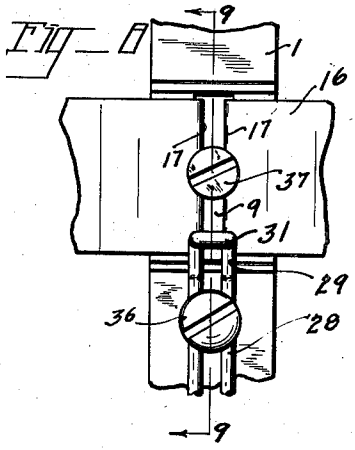

Fig 9

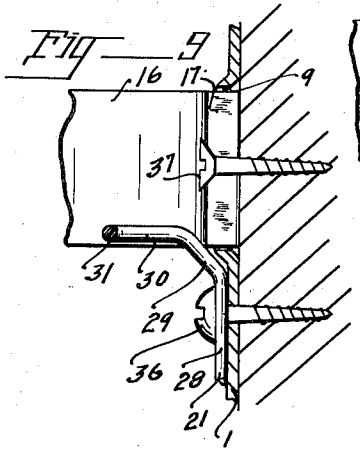

Fig 10

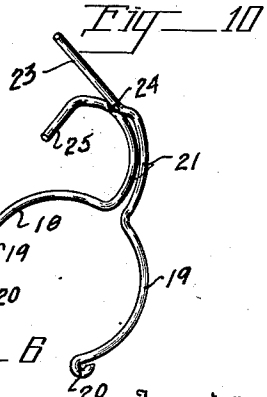

Fig 6

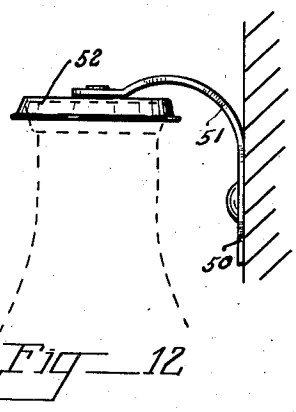

Fig 12

Fig 7

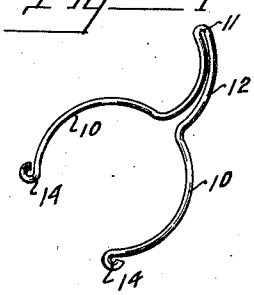

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Fig. 13

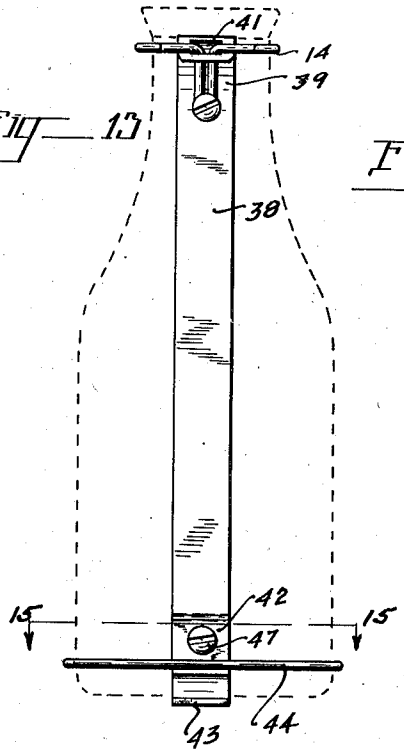
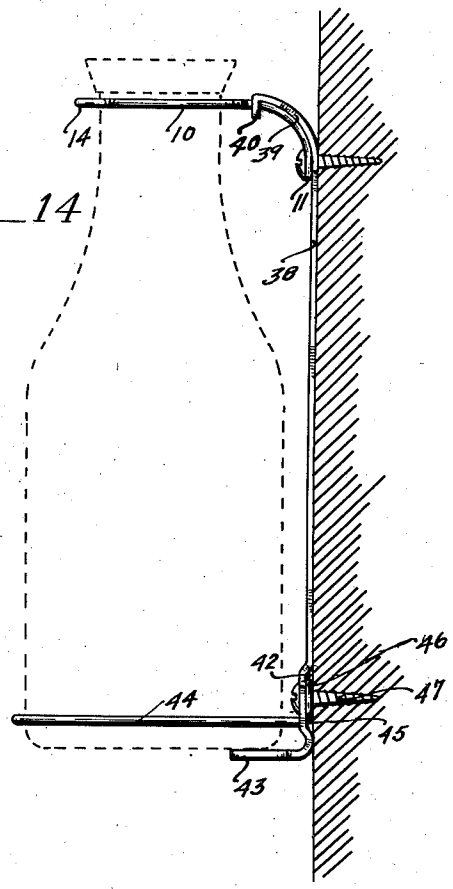


Fig. 14



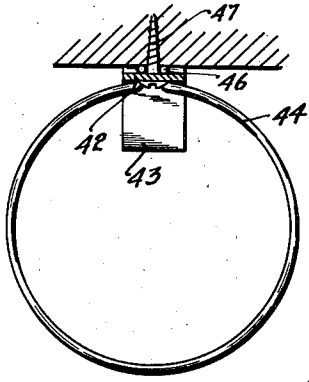


Fig. 15

Fig. 16

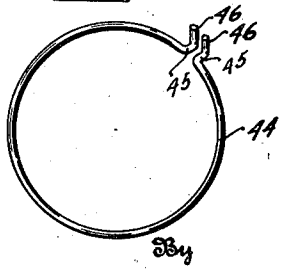
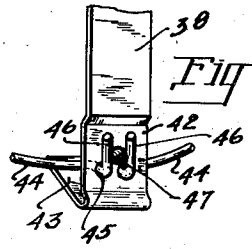


Fig. 17



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2,081,292

UNITED STATES PATENT OFFICE

2,081,292

MILK BOTTLE HOLDER

William Hayes Crossley, Klamath Falls, Oreg.

Application February 24, 1936. Serial No. 65,313

4 Claims. (Cl. 248—311)

The present invention relates to a device for receiving and dispensing full or empty milk bottles.

The object of the invention is to provide a holder for milk bottles which may be mounted in a secure position and preferably an elevated position out of reach of children and domestic animals.

Another object of the invention is to provide a bottle holder which may be easily and inexpensively stamped out of wire and sheet metal at a cost which will permit being sold at a low price, or to be given as premiums by milk dealers to stimulate trade.

Another object of the invention is to provide a device of this character which is constructed of few and easily assembled parts, and one in which fastening means in assembling the several parts may be substantially eliminated.

Another object of the invention is to provide a device of this character formed of parts which are interchangeable, and which certain parts may be interchanged thus transforming a solitary bottle holder into a multiple bottle holder.

These and other objects of the invention will be ascertained upon reading the specification and observing the accompanying drawings, wherein Figure 1 is a front elevation of a preferred embodiment of my invention. Figure 2 is a side elevation of the embodiment shown in Figure 1. Figure 3 is a plan view of the same embodiment. This view illustrates in broken line an auxiliary holder which may be attached thereto. Figure 4 is the sectional view taken on line 4—4 of Figure 2. Figure 5 is the sectional view taken on line 5—5 of Figure 4. Figure 6 is a perspective of the lower bottle neck holder forming one of the elements of the invention. Figure 7 is a perspective of the upper bottle neck holder. Figure 8 is a fragmentary front elevation of the basal portion of the holder showing a modification of the means for holding the basal band in position. This view shows a modified lower bottle neck holder. Figure 9 is the sectional view indicated by section line 9—9 in Figure 8. Figure 10 is a fragmentary front elevation of the basal portion of the holder showing a modified basal support having means for holding the basal band in position. Figure 11 is the sectional view indicated by section line 11—11 in Figure 10. Figure 12 is a fragmentary side elevation of the top of a modified bottle holder. This view shows a top engaging cam, spring actuated instead of the usual bottle neck holders. Figures 13 and 14 are respectively front and side elevations of another modification of the holder. Figure 15 is a vertical sectional view of the modification shown in Figures 13 and 14. Figure 16 is a perspective of the basal clamp employed in the last modification. Figure 17 is a fragmentary perspective of the basal portion of the last modification taken from a point rearwardly. This figure illustrates the means for attaching the basal band.

In the drawings, similar characters refer to similar parts throughout the several views.

Referring to the drawings, the numeral 1 indicates a primary support of strap metal having an outwardly curved upper end portion 2 which terminates in a downturned portion 3 having a transverse slot 4 therein. In the same manner the lower portion has an outwardly curved lower end portion 5 terminating in an upturned end 6 provided with a slot 7. Proximate the lower outwardly curved portion of the support there is an offset 8 which is supplied with a vertical slot 9 as shown in Figure 4 and related figures.

In conjunction with the primary support there is employed two neck grips one of which is indicated by the numeral 10 and shown particularly in Figure 7. This member is formed of wire bent to form a bight 11, paralleling portions 12 which have the same curvature as the curvature 2 or 5 of the support and then extends into two oppositely curved portions 13 terminating in spaced rounded ends 14. The parallelly curved portions 12 are extended through slot 4 in the upper end of support 1 as shown in Figures 1 and 2. Thereafter a screw 15 is passed through the bight 11 and an aperture prepared therefor in member 1 and threaded into a suitable support. This provides an upper support for the support as well as a means for securing the upper neck grip rigidly thereto.

There is also employed a basal band 16. This is of sufficient length to embrace the bottom of a milk bottle. Band 16 has hooked ends 17 which are passed into the slot 9. Means are provided (which will be described later) for holding the hook ends apart, thus preventing their removal.

The numeral 18, in Figure 6, indicates the other, or basal neck grip. This consists of two curved wires having curved portions 19 of size sufficient to grip a bottle neck. The ends of the curved portions are spaced apart and rounded as shown by the numerals 20. The two wires have paralleling portions 21 which are curved in conformity to the curvature of the lower portion of the support 1. At the termination of the portions 21, one wire projects upwardly as shown by

the numeral 23 and the other wire projects at an inclination for a space over the curved portion 21 as shown by the numeral 24 and then continues on in a horizontal portion 25 in a plane parallel to the plane jointly occupied by the curved neck engaging portions 19. The portions 21, 22, 23, 24, and 25 are projected through the slot 7 in the base of support 1 as shown in Figure 2. The upright portion 23 is inserted between the hook ends 17 of the basal band 16. This prevents the moving together of such ends and consequently their removal from the slot 9. The portions 24 and 25 project into the space defined by the band 16 and form a support for the base of a milk bottle as shown by the outline of such bottle in Figures 1 and 2. In order to hold member 18 in position a screw 26 is inserted between the portions 21 and extends through a hole provided therefor in the support 1 and is screwed into a suitable support. This screw supports the member 18 to the member 1, it also supports member 1 in a position to support a milk bottle.

Figures 8 and 9 show a still further modification of the basal bottle neck grip. This is provided with the gripping portions 19 which are not shown. The parallel portions 21 curve as heretofore described, and then continue upright as shown at 28, then at an inclination forwardly as indicated by the numeral 29 and then horizontally as shown at 30 terminating in a bight 31 joining the two portions or portions 21 and their extensions just described. A screw 36 passed between portions 28 and through support 1 secures member 18 and member 1 in place. A screw 37 inserted between the ends 17 and through slot 9 secures band 16 in place.

Figures 10 and 11 illustrate a further modification of the basal neck grip. In this view a grip of the type shown in Figure 7 is employed. In this instance the grip is reversed and inserted through the slot 7 in the base of member 1, and it is secured in place, at the same time securing support 1 in place by a screw 32 extending through bight 11 and member 1. To hold the ends 17 of band 16 in place, an upright member 33 has a horizontal portion 34 extending through the slot 9 in support 1 forming a rest for the base of a bottle, the upright being positioned behind the offset in member 1. The horizontal portion 34 passing between the hook ends 17 of band 16 keeps them apart, and consequently prevents their removal from the slot.

Figures 13 to 17 inclusive, show a modified form of support member, as indicated by numeral 38 having an upper curved end 39 terminating in a down turned portion 40 having a slot 41 similar to the construction 2, 3, and 4 heretofore described. The lower portion of support 38 is provided with an offset 42 and a horizontal portion 43 constituting a bottle rest. In connection therewith there is provided a band 44 which is a wire loop having the ends thereof proximate each other and bent radially to the center of the loop as shown at 45, and then vertically to such radial portions as shown at 46. The ends of the band are passed through perforations provided therefor in offset 42 with the upright portions 46 against the inner face of the offset. The upright portions 46 hold the band in a horizontal position. Another aperture is provided in the offset 42 to receive the screw 47 for securing the assembly to a suitable support. The upper grip and upper end of support 38 are held in place by a screw 47 passed through bight 11 of neck grip 10 and the upper end of support 38.

The construction shown in Figure 12 is a modification in so far as the neck grip is concerned. In all other respects the lower part of support 50 may be any of the constructions just described. The upper portion is curved as shown by numeral 51 and the end is provided with a cap 52 which fits over the end or top of a bottle.

Using the embodiment shown in Figures 1 and 2 as an illustration, the operation of the invention will now be described. The several parts are assembled as heretofore described and the complete device is mounted to a support as shown by Figure 2. It is assumed that the device will be employed for exchanging milk bottles in the dispensing of bottled milk. In this case an empty bottle is placed so that it is supported by the basal grip 18. This is done by placing the neck of the bottle against the spaced rounded ends 20 of the grip spreading them apart and allowing the rounded portions 19 of the grip to hold the bottle neck with the top bead B of the bottle neck resting upon such rounded portions. The dispenser removes the empty bottle and places the full bottle in the support by placing the bottom of the bottle within the band 16 with the base resting upon the horizontal support 25, at the same time pressing the neck of the bottle between the curved portions 13 of the upper neck grip 10. If instead of the upper neck grip the cap 52 is employed, this cap is raised against the spring action of the curved portion 51 and then lowered when the bottle is in place. This cap as well as the upper neck grips will prevent tipping of the bottle while it is being held by the holder.

In the event it is desirable to support more than one empty bottle by their necks the construction shown in the broken outline in Figure 3 may be employed. These consist of wire bent to form a bight 53 and having straight parallel portions 54 curved bottle neck engaging portions 55 terminating in rounded spaced ends 56. The neck of a bottle is placed between the curved portions 55 by spreading the ends 56. These members are held by the band 16 by inserting the parallel portions through a slot 58 therein and securing bights 53 together by securing means 57.

While a specific form of the improvement has been described and illustrated herein, it is desired to be understood that the same may be varied, within the scope of the appended claims without departing from the spirit of the invention.

Having described my invention, I claim:

1. In a milk bottle holder, an elongated upright support terminating at the top in an outwardly curved portion, such curved portion terminating in a projecting portion in a plane parallel to the body of the support, said projecting portion having a slot, a bottle neck gripping member having portions inserted and held in the aforesaid slot, an offset near the lower end of the body having a slot, a band having hooked ends inserted in the last slot, and means separating such ends to prevent their removal from the slot and forming a basal seat for a bottle placed within said band.

2. In a milk bottle holder, an elongated upright support terminating at the top in an outwardly curved portion, such curved portion having a projecting portion provided with a slot, a bottle neck gripping member having portions inserted and held in the slot, means for holding such member in place, an offset proximate the lower end of the support, there being a slot in such offset, a band having hooked ends inserted

in the last slot, a member spreading the ends of the band apart and preventing their removal from the last slot, and a second member connected with the last mentioned member projecting within the confines of the band and forming a basal seat for a bottle placed within such band.

3. In a milk bottle holder, an elongated upright support terminating at the top in an outwardly curved portion provided with a slot, a bottle neck gripping member having portions inserted and held in the slot, the support having an offset portion proximate its lower end, a bottle neck gripping member having a portion inserted through the slot, the offset portion having a slot, a band having hooked ends inserted within the last mentioned slot, and a member separating the hooked ends of the band to prevent their removal from such slot and having a portion projecting horizontally to form a basal seat for a bottle placed within said band.

4. In a milk bottle holder, an elongated upright support provided with a bottle neck holder at its top, an offset proximate its base provided with a slot, a band having hooked ends seated in such slot, means for separating such hooked ends for preventing their removal from the slot, and said member having a portion projecting from the support forming a basal seat for a bottle placed within said band.

WILLIAM HAYES CROSSLEY.