Nov. 12, 1929. E. J. HARRIS 1,735,502

BOTTLE HANDLING DEVICE

Filed Jan. 17, 1928

Fig. 1.

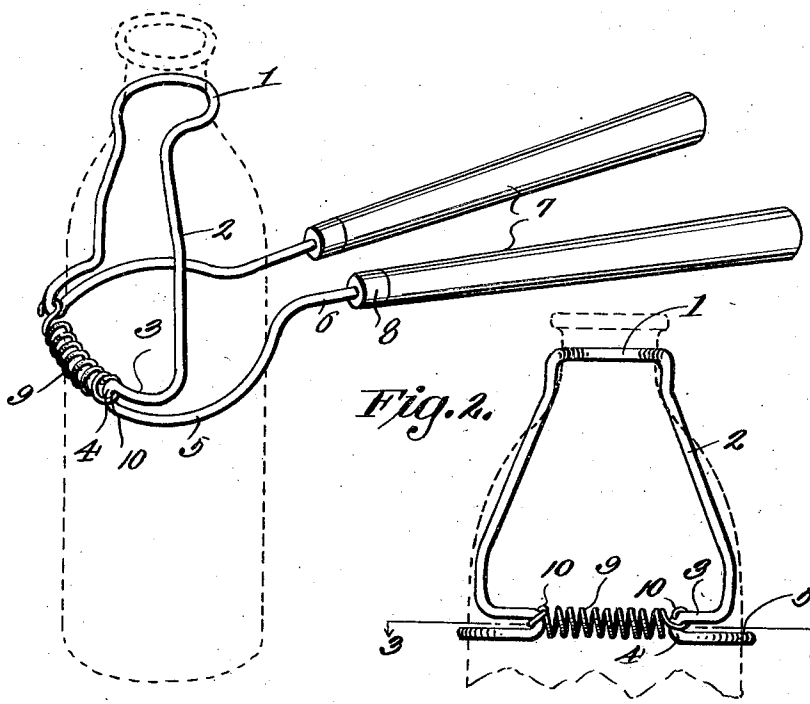
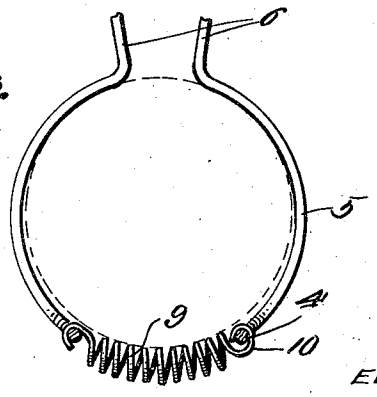



Fig. 2.




Fig. 3.




WITNESSES

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# UNITED STATES PATENT OFFICE

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## BOTTLE-HANDLING DEVICE

Application filed January 17, 1928. Serial No. 247,381.

This invention relates to an improved device for handling bottles and more particularly to a device which may be conveniently employed for handling nursing bottles during the operation of sterilizing the same.

As is well known, in sterilizing nursing bottles, it is customary to immerse the bottles in boiling water for a short period of time and difficulty has been heretofore experienced in removing the bottles from the boiling water without likelihood of burning one's hands, and therefore the present invention has as its primary object to provide a simple device which may be readily adapted to a nursing bottle immersed in water and employed for the purpose of lifting the bottle from the water and inverting the same so as to discharge the water contained therein.

It is desirable, in sterilizing nursing bottles, to agitate the bottle when introduced into the boiling water, so as to insure of a thorough cleansing of the interior of the bottle, but this cannot be accomplished, conveniently, without the employment of some means for engaging and moving the bottle while submerged in the boiling water, and therefore, the invention has as a further object to provide a device which may be applied to a nursing bottle and manipulated so as to effect agitation of the bottle in the boiling water, the device being likewise adapted, as stated above, to be manipulated so as to effect a tilting of the bottle at the time it is lifted from the water, and thus effect a discharge of the water from the bottle.

While the accompanying drawings and the description which is to follow, constitute a disclosure of the preferred embodiment of the invention, it will be understood that various changes may be made within the scope of what is claimed.

In the accompanying drawings:

Figure 1 is a perspective view of the device embodying the invention applied to a nursing bottle, which is shown in broken lines in the said figure;

Figure 2 is a view in front elevation of the device applied;

Figure 3 is a horizontal sectional view taken substantially on the line 3—3 of Figure 2 looking in the direction indicated by the arrows.

The device, embodying the invention, is preferably formed from a single strand of resilient wire which is bent intermediate its ends to provide a neck-encircling loop 1 of approximately semi-circular contour, the portions of the strand at the opposite ends of the loop being extended downwardly along diverging lines to provide spaced side members which are indicated by the numeral 2, these members being suitably curved or otherwise formed to approximately conform to the shoulder of the bottle to be engaged by the device. The side portions of the strand, at the lower ends of the side members 2, are bent inwardly toward each other along arcuate lines as at 3 and thence to form acute bends 4 providing portions 5 which extend beneath the portions 3 and rearwardly beyond the bends between the portions 2 and 3, on arcuate lines, to conform substantially to the body of the bottle to be handled. The body embracing portions 5, thus provided, terminate in shank portions 6 which extend in normally diverging relation to each other, on straight lines, and to these shank portions are fitted the forward ends of handles which are indicated by the numeral 7 and which handles may be of wood or any other material found suitable for the purpose and of any desired contour, ferrules 8 being preferably secured to the forward ends of the handles so as to reinforce the handles at these points and prevent any splitting of the handles due to the engagement of the ends of the shanks 6 therein.

By reference to Figures 1 and 3 of the drawings it will be observed that the portions 3 and 5 extend on arcuate lines from the bends 4 by which they are joined and on the same arcs as the greater length of the said body embracing portions 5, so that all of these portions are of a contour to adapt the same to embrace the opposite sides of a bottle over which the device, as a whole, is fitted.

In order that the body gripping or embracing members 5 may be yieldably held against relative separation and thus adapt the said members to be brought into firm gripping

engagement with the opposite sides of the body of the nursing bottle to be lifted by the use of the device, when the handles 7 are brought together, a tension spring 9 is provided between the stems 4 and is formed at its ends with eyes 10 which engage the said bends in the manner clearly shown in the several figures of the drawings.

In the use of the device the handles 7 are loosely grasped in the hand of the user and the device, in the postion shown in Figure 1, is fitted downwardly over the top of the bottle to be lifted or otherwise handled until the body embracing portions 5 extend about and embrace the opposite sides of the nursing bottle and the neck embracing portion 1 embraces the neck of the bottle as shown in Figure 1, whereupon the user's hand is closed about the handles 7 so as to draw the members 5 toward each other and bring the same into firm clamping engagement with the opposite sides of the body of the nursing bottle. It will be evident that in this manner the device may be conveniently employed for gripping a nursing bottle to permit of its being introduced into a pan of boiling water whereupon the device may be manipulated so as to tilt the bottle to permit the water to enter and fill the same and then in a manner to effect suitable agitation of the bottle in the water to insure of a thorough cleansing of the interior of the bottle, after which the device may be disengaged from the bottle and the bottle permitted to remain in the boiling water until thoroughly sterilized. The device may then be reengaged with the bottle and the handles 7 brought together so as to cause the body embracing members to embrace the opposite sides of the body of the nursing bottle and the device may then be employed to withdraw the bottle from the water and invert the same to discharge the water therefrom after which the bottle may be deposited in an upright postion upon a table or shelf or other support and the handles 7 relieved of pressure and the device lifted from engagement with the bottle.

It will be evident that by the provision of the spring 9, which merely yieldably resists separation of the body embracing members 5 of the device, considerable pressure may be exerted against the handles 7 to cause the said members 5 to firmly embrace the opposite sides of the nursing bottle without any likelihood however of such pressure being exerted against the wall of the body of the bottle as to cause crushing of the same, the spring 9 yielding sufficiently to permit of necessary relative separation of the bends 4, under these conditions, to limit the pressure exerted by the members 5 against the body of the bottle and compensate for any excessive pressure which might be brought to bear upon the handles 7 by the user tightly closing her hand about the handles.

It will also be understood from the foregoing description and from an inspection of the drawings that due to the provision of the neck embracing portion 1 and the body embracing portions 5 and the relative vertical disposition of these portions, the bottle, when gripped by the device, will be steadied so that there will be no likelihood of any tilting displacement of the bottle while the device is engaged therewith and is being manipulated. It will also be understood from the foregoing that the device is adaptable to bottles of various sizes and is therefore capable of substantially universal use.

It will furthermore be understood from the foregoing description that, inasmuch as the neck embracing member 1, side members 2, and body embracing members 5 are all formed from a single strand of resilient wire, the neck embracing member 1 constitutes a resilient connection between the body embracing members 5.

Having thus described the invention, what I claim is:

1. A device for manually handling bottles in the sterilization thereof comprising body-embracing members, a neck-embracing member connecting the body-embracing members, and handles extending from the body-embracing members.

2. A device for manually handling bottles in the sterilization thereof comprising body-embracing members, a resilient neck-embracing member connecting the body-embracing members, and handles extending from the body-embracing members.

3. A device of the class described comprising resilient body-embracing members, side members upstanding therefrom in relatively inclined relation to each other, a resilient neck-embracing member connecting the upper ends of the side members, and handles extending from the body-embracing members.

4. A device of the class described comprising body-embracing members, a neck-embracing member connecting the body-embracing members, a tension spring extending between the body-embracing members at one end thereof, and handles extending from the body-embracing members at the opposite ends thereof.

5. A device of the class described comprising a neck-embracing member, side members extending downwardly and outwardly therefrom at opposite sides thereof, resilient body-embracing members of arcuate form connected each at one end to a respective one of the side members, shanks extending from the other ends of the body-embracing members, and handles carried by said shanks.

6. A device of the class described comprising resilient arcuate body-embracing members, shanks extending from corresponding ends of the members, handles carried by said

shanks, side members connected by integral bends with the other ends of the body-embracing members and inclined upwardly toward each other, a neck-embracing member extending between and connecting the upper ends of the side members, and a tension spring extending between said bends and yieldably connecting the same.

7. A device of the class described comprising a single strand of resilient wire bent to provide an intermediate neck-embracing member and side members extending downwardly and outwardly from opposite sides thereof, the strand at the lower ends of the side members extending on arcuate lines toward each other and being provided with acute bends providing body-embracing members extending on arcuate lines in opposite directions, a tension spring connected at its ends to the said bends and extending between the same, the other ends of the body-embracing members being extended on diverging lines to provide shanks, and handles fitted to the said shanks.

In testimony whereof I affix my signature.

EDWIN JAMES HARRIS.