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J. ROGGINGER

CLAMPING RING

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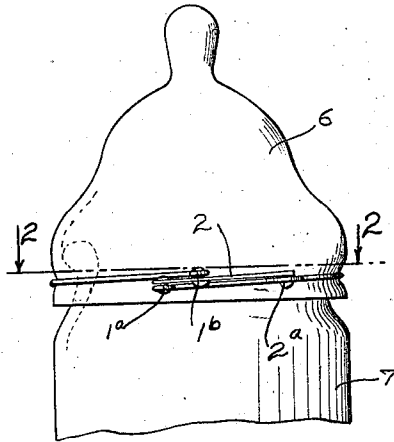


FIG 1

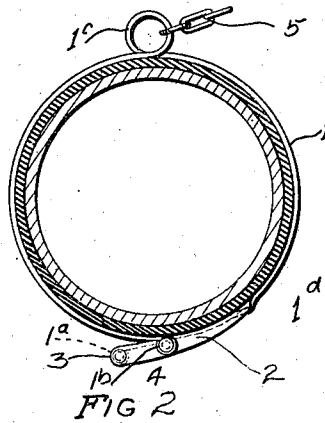


FIG 2

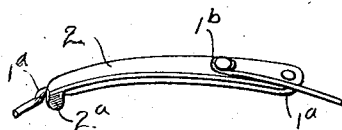


FIG 3

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CLAMPING RING.

Application filed November 4, 1925. Serial No. 66,708.

My invention relates to clamping rings, more particularly adapted for clamping nipples to the necks of nursing bottles or for clamping covers, caps or the like over
5 containers.

The objects of my invention are: first, to provide a clamping ring for securely clamping a nipple, cover or cap around the open end of a bottle or other container, and
10 which clamping ring may be easily and quickly removed, as desired; second, to provide a clamping ring of this class of yieldably extensible construction, the ends of which
15 ring are contracted or drawn relatively to each other by over-center lever means yieldably retained in a locked position by the inherent resiliency of the ring; third, to provide
20 a means in connection with an over-center lever actuated clamping ring for positively locking the contracted position of the lever relatively to the ring; fourth, to provide a yieldable, wire clamping ring
25 formed at one side with a loop providing spring action for extension of the ends of the ring and means for securing a cord, cable or chain to the ring; fifth, to provide
30 a wire clamping ring of this class pivotally connected at its free ends to the one end of and intermediate the ends of an over-center lever for contracting the ends of the ring relatively to each other, the lever being
35 resiliently retained in a locked position by reason of its over-center connection with the ring when contracted and also by reason of the inherent resiliency of the ring; sixth, to provide an over-center lever actuated wire clamping ring in which the actuating
40 lever is provided at its free end with an extended lug adapted to be sprung to one side and locked behind a second loop in the main ring structure; seventh, to provide as
45 a whole a novelly constructed clamping ring of this class, and eighth, to provide a clamping ring of this class which is particularly simple and economical of construction, durable, efficient, and which will not readily deteriorate or get out of order.

With these and other objects in view, as
50 will appear hereinafter, my invention consists of certain novel features of construction, combination and arrangement of parts and portions, as will be hereinafter de-

scribed in detail and particularly set forth in the appended claims, reference being had
55 to the accompanying drawings and to the characters of reference thereon, which form a part of this application, in which:

Figure 1 is a fragmentary side elevational view of a nursing bottle with a nipple positioned over the open end thereof and my
60 clamping ring securing the nipple to the bottle; Fig. 2 is a transverse sectional view thereof, taken through 2—2 of Fig. 1, and Fig. 3 is an enlarged perspective view, showing
65 the locking or clamping lever in a contracted or locked position relatively to the ring, shown fragmentarily, the view being taken from the inside, as indicated by the
70 line 3—3 in Fig. 2.

Like characters of reference refer to similar parts and portions throughout the several views of the drawings.

The ring member 1, lever 2, rivets 3 and 4, and the chain 5, constitute the principal
75 parts and portions of my clamping ring structure.

The ring member 1 is made of resilient wire in annular form open and overlapping at one side with loops 1^a and 1^b at its ends
80 and a relatively large loop 1^c at its opposite side and intermediate its ends, as shown best in Fig. 2. The lever 2 for contracting the ring member 1 around the nipple 6, for
85 securing the nipple around the shouldered neck of the nursing bottle 7, consists preferably of a flat piece of metal slightly curved and pivotally connected at its one end, by means of a rivet 3, through the loop
90 1^a of the ring, and also pivotally connected intermediate its ends, by means of a rivet 4, through the other loop 1^b at the other end of the ring member, as shown. The looped
95 ends of the ring member 1 are pivotally connected to the lever 2 on the opposite sides of the latter, as shown best in Fig. 1. When the ring member 1 is contracted by the lever
100 2, the pivotal connection of the lever 2 and the loop 1^a is preferably slightly extended from the main portion of the ring member and the nipple 6, as shown in Fig. 2, to provide
105 sufficient over-center action on the part of the lever for retaining the free end of the same against the nipple. The loop 1^c provides spring means to permit the ring member to be contracted to a certain extent

and to yieldably hold the lever in a locked position. The loop 1^c also permits the securing of a chain 5, or other suitable means, to the ring member to prevent the same
5 from dropping, if desired.

The outer or free end of the lever 2 is provided at its inner edge with a downwardly extending lug 2^a, which is adapted to be inserted into an outwardly bent loop 1^d provided at a certain distance from the end of the ring member provided with the loop 1^a. In order to lock the lever 2 relatively to the ring member 1, the former is raised slightly at its free end after being shifted
10 to a contracted position, and the lug 2^a inserted into the loop 1^d, it being noted that the lever 2 is made of plate sufficiently resilient to permit ready lateral distortion of the lever 2 to a certain extent, the resiliency
15 of the lever 2 serving to retain the lug 2^d within the loop 1^d.

Though I have shown and described a particular construction, combination and arrangement of parts and portions, I do not
25 wish to be limited to this particular construction, combination and arrangement, but desire to include in the scope of my invention the construction, combination and arrangement substantially as set forth in the
30 appended claims.

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

1. In a device of the class described, a
35 ring member open at one side with its ends overlapping, and a locking lever pivotally connected at its one end with the one end of said ring member and pivotally connected
40 intermediate its ends with the other end of said ring member, said lever being laterally distortable and provided with a locking lug adapted to be laterally shifted and inserted into an outwardly extended loop in said
ring member.

2. In a device of the class described, the combination with a container, of a resiliently extensible annular ring member open at one side and adapted to extend completely
50 around the neck of the container, and a locking lever pivotally connected at its one end and intermediate its ends to the ends of said ring member for opening and contracting the same, said ring member having
55 a loop portion near the end connected with the one end of said lever, said loop portion being adapted to receive locking means at the free end of the lever when said end is positioned against said container.

3. In a device of the class described, a
60 resiliently extensible ring member open at one side, and a locking lever pivotally connected at its one end and intermediate its ends to the ends of said ring member for opening and contracting the same, said lever
65 being laterally distortable and provided at

its free end with means for locking said lever in contracted form into an extended loop in said ring member.

4. In a device of the class described, a resiliently extensible wire clamping ring
70 member open at one side and provided at its opposite side and intermediate its ends with a loop providing spring means for said ring member and means for securing a holding means therefor, and a contracting lever
75 pivotally connected to the ends of said ring member in over-center relation for resiliently retaining said lever in contracted relation relatively to said ring member.

5. In a device of the class described, a
80 resiliently extensible wire clamping ring member open at one side and provided at its opposite side and intermediate its ends with a loop providing spring means for said ring member and means for securing a holding
85 means therefor, and a contracting lever pivotally connected to the ends of said ring member in over-center relation for resiliently retaining said lever in contracted relation
90 relatively to said ring member, said lever being distortable in the direction of the axis of said ring member and provided at its free end with a lug adapted to be
95 inserted and resiliently retained in an outwardly extended loop in said ring member.

6. In a device of the class described, a resilient wire clamping ring member open at one side and provided intermediate its
100 ends with a completely circular contractible loop, and lever means connecting the free ends of said ring member.

7. In a device of the class described, a resilient wire clamping ring member open at one side and provided intermediate its
105 ends with a completely circular contractible loop, and lever means connecting the free ends of said ring member, said lever being adapted to contract said ring member and adapted to be locked near its free end behind
110 said ring member.

8. In a device of the class described, a resilient wire clamping ring member open at one side and provided intermediate its
115 ends with a completely circular contractible loop, the free ends of said ring member being provided with loops, and a flat ring contracting lever pivotally connected at its one end and intermediate its ends to the two
120 ends of said ring member in over-center relation at the opposite sides of said lever.

9. In a device of the class described, a resilient wire clamping ring member open at one side and provided intermediate its
125 ends with a completely circular contractible loop, the free ends of said ring member being provided with loops, and a flat ring contracting lever pivotally connected at its one end and intermediate its ends to the two ends of said ring member in over-center
130 relation at the opposite sides of said lever,

said lever being resilient and distortable in the direction of the axis of said ring member and provided at the inner edge of its outer end with a lug bent at substantially a right angle therewith, said ring member being provided at a spaced distance from the end connected with the one end of the

lever with an outwardly bent loop adapted to receive and retain the lug of said lever.

In testimony whereof, I have hereunto set my hand at San Diego, California, this 24th day of October, 1925. 10

JOHN ROGGINGER.