

UNITED STATES PATENT OFFICE.

CLARENCE L. NACE, OF OAKLAND, CALIFORNIA.

BOTTLE CAP.

Application filed April 25, 1921. Serial No. 464,407.

To all whom it may concern:

Be it known that I, CLARENCE L. NACE, a citizen of the United States, residing at Oakland, in the county of Alameda and State of California, have invented certain new and useful Improvements in Bottle Caps, of which the following is a specification.

My invention is an improved bottle cap which may be readily applied to or removed from the mouth of the bottle and which may be swung partly open to pour out the contents of the bottle and will close automatically when released.

Referring to the annexed drawing in which my invention is illustrated and which forms a part of this specification:

Figure 1 is a side elevation of a milk bottle and my cap closing the mouth thereof.

Figure 2 is a vertical longitudinal section of said milk bottle and my cap closing the mouth of the bottle.

Figure 3 is a plan view of my cap.

My cap includes a disk 1 and a spring clip 2. The clip 2 is made of a single piece of resilient wire, bent in the middle into a U-shaped foot 3, then upwardly from the ends of said foot backwardly over the foot in semi-circular formation and downwardly at an angle, forming upper arms 4 and 5, and then upwardly at 6 at an angle under the arms 4 and 5, forming arms 7 and 8, the arms 4 and 5 being twisted together from the bend 6 for a short distance at 9, and the arms 7 and 8 diverging from said bend and their ends 10 and 11 being bent outwardly substantially at right angles. The foot 3 is secured to the upper side of the disk 1 at one edge thereof with the intermediate member of the foot adjacent said edge.

The mouth of the bottle 15 is formed with an internal annular seat 16 upon which rests the disk 1, and with an external annular bead 17, the under side of which is engaged by the ends 10 and 11 of arms 7 and 8, whereby the clip 2 holds the plate 1 tightly upon said ledge, hermetically sealing the bottle.

By pressing down on the lower or twisted portion 9 of the arms 4 and 5, the side of the

disk 1 opposite the clip 2 is raised off the ledge 16 so that the contents of the bottle may be poured out. Upon releasing the clip, its spring action closes the disk 1 firmly upon the seat 16. The disk 1 may be removed from the ledge 16 and the mouth of the bottle upon disengaging the ends 10 and 11 of arms 7 and 8 from the under side of the bead 17.

Having described my invention, I claim:

1. A bottle cap including a disk adapted to rest upon the seat in the mouth of the bottle, a clip comprising a single piece of wire bent in the middle forming a foot, then bent upwardly and backwardly over said foot, forming arms which are twisted together, and then bent upwardly under said arms at an angle, forming other arms for engaging the under side of the bead on the mouth of the bottle, said foot being secured to the upper side of said disk near the edge of the disk.

2. A bottle cap including a disk, a clip, said clip comprising a single piece of resilient wire bent into a foot, arms extending in a semicircle from said foot, and arms extending from the lower part of the aforesaid arms to the under side of the bead on the mouth of the bottle, said foot being secured to the upper side of the disk at the edge thereof, and said first mentioned arms being twisted together.

3. A bottle cap including a disk adapted to rest upon the seat in the mouth of the bottle, a clip comprising a single piece of wire bent in the middle forming a foot, then bent upwardly and backwardly over said foot, forming arms which are twisted together, and then bent upwardly under said arms at an angle, forming other arms for engaging the under side of the bead on the mouth of the bottle, said other arms terminating in outwardly bent parts extending in opposite directions, and said foot being secured to the upper side of said disk near the edge of the disk.

In testimony whereof I affix my signature.

CLARENCE L. NACE,