W. E. GODDARD.

CLAMP FOR FLEXIBLE CONTAINERS.

APPLICATION FILED DEC. 27, 1920.

1,387,975. Patented Aug. 16, 1921.

Fig. 1.

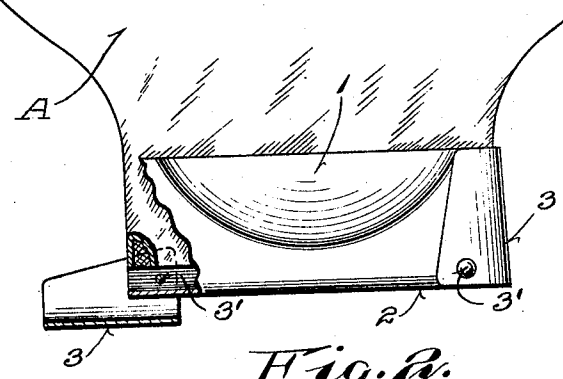


Fig. 2.

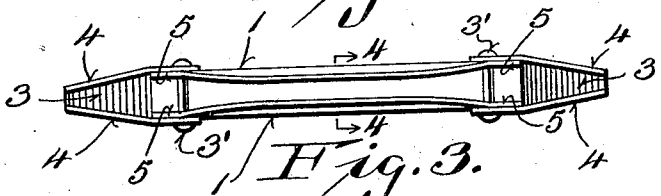


Fig. 3.

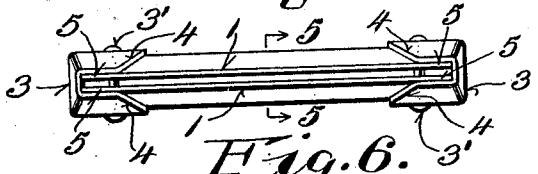
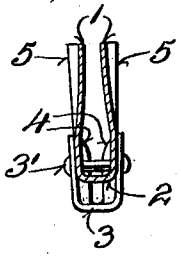


Fig. 6.

Fig. 4.



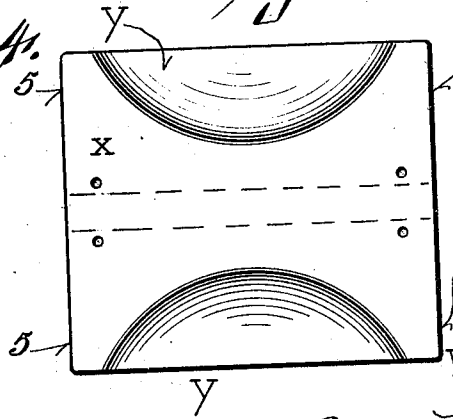
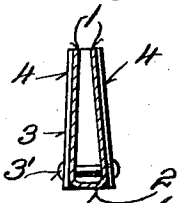


Fig. 5.



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CLAMP FOR FLEXIBLE CONTAINERS.

1,387,975. Specification of Letters Patent. Patented Aug. 16, 1921.

Application filed December 27, 1920. Serial No. 433,460.

To all whom it may concern:

Be it known that I, WILLIAM EDWARD GODDARD, a citizen of the United States, and resident of Watertown, in the county of Jefferson and State of Wisconsin, have invented certain new and useful Improvements in Clamps for Flexible Containers; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention refers to closure clamps for the opened filling ends of flange containers, such for example as water bottles, fountain syringes, milk bottles or the like.

The primary object of my invention is to provide a simple, economical and effective detachable flat clamp for such containers, wherein all projections are eliminated to thus guard against injury by contact with the clamp, either to the person or clothing of the users.

Specific objects of my invention are:

To provide a three-piece flat clamp having swinging end clips of closely wedge type, whereby the lips of a resilient clamping body are caused to uniformly bite the adjacent receptacle, about its filling opening, to thus effectually seal such receptacle.

To provide the lips of the clamping body with normally opposed concavo convex surfaces, whereby the closure pressure exerted upon the ends of the clamping body is uniformly distributed along the sealing surface of the receptacle.

To provide as a manufacturing process a friction clamp, the jaw blank of which is composed of resilient material, which, in its initial dieing operation, is formed with concavo convex edges permanently to folding, and in which the end closures are formed from metal blanks folded upon themselves to develop a wedge shaped mouth, the base folds of the three units being rounded to prevent unobstructed surfaces when the clamp is in use.

With the above and other minor objects in view, the invention consists in certain peculiarities of construction and combination of parts, as are hereinafter set forth with reference to the accompanying drawings and subsequently claimed.

In the drawings:

Figure 1 represents a fragmentary elevation of a portion of the flexible container having affixed to its filling mouth a clamp embodying the features of my invention, parts of which are broken away and in section to more clearly illustrate the details of construction.

Fig. 2 is a plan view of the clamp showing clip members in open position.

Fig. 3 is a similar view showing clip members in closed position.

Fig. 4 is a cross-section of the clamp, the section being indicated by line 4—4 of Fig. 2.

Fig. 5 is another cross section of the clamp, the section being indicated by line 5—5 of Fig. 3 in which the clip member is shown closed with relation to the clamp body, and

Fig. 6 is a diagrammatic plan view of a metallic blank from which the clamp body is formed.

Referring by characters to the drawings, as best shown in Fig. 6, the clamp body is formed from a single rectangular body x, having its edges as indicated, bowed inwardly upon an arc of the circle, as at y, the bowed or concavo convex edges being gradually merged into a straight portion adjacent to the corners of the blank. Hence, when the blank is folded upon itself it forms gripping lips 1—1, which are concavo convexed in form with their opposed edges increasing toward the ends of the clamp body, as best shown in Fig. 2. The base of the body is folded to present a rounded outer surface as shown at 2. Metallic end clips 3—3 are secured to the lower folded corners of the body by means of pivot pins 3′.

As clearly shown in the drawings, the clip members are formed from single rectangular blanks folded upon themselves to develop gripping jaws 4—4, which are tapered inwardly from their hinged points. Thus the gripping jaws develop wedge shapes for engagement with the end edges 5 of the clamping body, it being understood that when the clips are folded against the faces 5, the tapered jaws 4 thereof cause the entire clamping body to gradually contract, whereby the lip edges of the same will be compressed to uniformly bite the surface of the container A about its filling end.

I claim:

1. A detachable friction clamp for closing the open end of a flexible container comprising a resilient metallic body, folded upon itself to form gripping lips, an end closure for the body, comprising open mouth clips in pivotal union with the base corners of the clamping body, the edges of the clips being contracted from their pivot points so as to

progressively compress the clamping lips when said clips are folded against the end edges of the aforesaid clamping body.

2. A detachable friction clamp for closing the open end of a flexible container, comprising a resilient metallic body folded upon itself to form companion gripping lips, the edges of which are normally concavo convexed, and end closures for the body comprising open mouth clips in pivotal union with the lower corners of the clamping body, the mouth edges of said clips being gradually tapered inwardly from their pivot points for progressive engagement with the end edges of the aforesaid clamping body.

In testimony that I claim the foregoing I have hereunto set my hand at Watertown, in the county of Jefferson and State of Wisconsin.

WILLIAM EDWARD GODDARD.