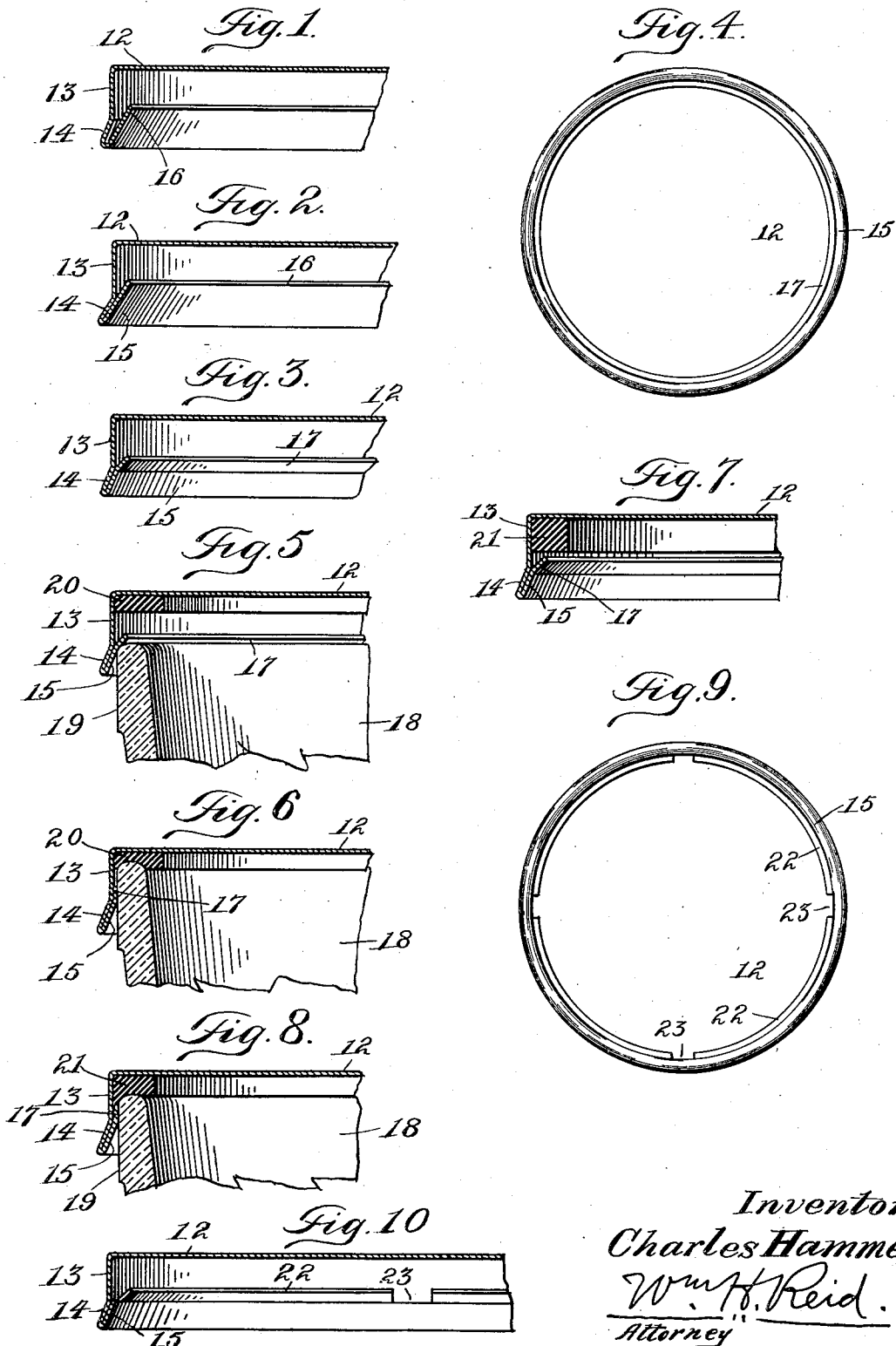


C. HAMMER.
JAR CLOSURE.
APPLICATION FILED JUNE 28, 1918.

1,316,231.

Patented Sept. 16, 1919.



UNITED STATES PATENT OFFICE.

CHARLES HAMMER, OF QUEENS, NEW YORK, ASSIGNOR TO AMERICAN METAL CAP COMPANY, OF BROOKLYN, NEW YORK, A CORPORATION OF NEW YORK.

JAR-CLOSURE.

1,316,231.

Specification of Letters Patent.

Patented Sept. 16, 1919.

Application filed June 28, 1918. Serial No. 242,396.

To all whom it may concern:

Be it known that I, CHARLES HAMMER, a citizen of the United States, and resident of Queens, in the county of Queens and State of New York, have invented certain new and useful Improvements in Jar-Closures, of which the following is a specification.

This invention relates to the form of caps or closures for jars, cans or other kinds of containers, wherein a part of the flange at the lower portion has a frictional engagement with the wall of the jar or other vessel, whereby a strong and uniform engagement therewith is provided, to securely retain the closure on the vessel.

The object of the present invention is to provide an improved form of closure of this character, in which an annular portion of the margin of the flange will project inwardly to have a resilient or yieldable connection with the jar or can outer wall, and will also provide a flaring portion serving to guide the closure when first placed on the vessel; and which closure will have a strengthening portion at the lowermost margin; and which closure will also present a projecting edge that by rolling the sealed vessel to engage this edge, or giving a few hammer blows to such edge, the free engaging marginal portion will yield or bend and the closure will release its strong engagement with the vessel.

A further object of the invention is to provide a closure of the character set forth in which the inner marginal portion that engages the wall of the vessel, will be of a segmental form to increase the yieldable character of the engagement with the vessel.

In the accompanying drawing showing embodiments of my invention, Figure 1 is a partial sectional view through the closure in the partly finished condition. Fig. 2 shows the same in the completed form. Fig. 3 shows the closure slightly modified. Fig. 4 is a plan view of the closure shown in Fig. 3. Fig. 5 shows the closure as first applied to a jar. Fig. 6 shows the closure in the sealed position on the jar. Fig. 7 shows the closure of Fig. 3 with a large ring gasket. Fig. 8 shows this form of closure sealed on the jar. Fig. 9 is a plan view of a modified form of closure, and Fig. 10 a partial sectional view of the same.

As set forth the closure is in the form of a

cap having an end wall 12 and a continuous annular side wall 13 preferably cylindrical. The lower portion of the side wall is flared outwardly in a conical form, as at 14, and the marginal portion is thereupon bent inwardly, or doubled back on the flaring portion 14, to form the wall 15. In Fig. 1 the bent or doubled portion is not brought against the flaring portion, but in the other views these two walls are shown as brought together or doubled. This will form a free inwardly projecting annular wall 16 as shown in Fig. 2, extending upwardly and also inwardly toward the axis of the closure, and offset from the cylindrical wall 13. In Fig. 3 and the other views the free marginal rim portion beyond the doubled portion 14 is shown as bent toward the axis or downwardly to make a slight angle with the doubled portion, or with the inner wall 15 thereof, as at 17.

By this construction it will be seen that the doubled portion or wall 15 flares outwardly and serves to guide the closure when first placed on the jar 18, see Fig. 5. The upper edge of the jar wall will engage the free marginal portion 17 as the closure is forced down, and since this margin is free from the cylindrical wall of the closure it will stretch or reform by bending outwardly, and thereby form a very secure engagement with the outer wall 19 of the container, as indicated in Fig. 6. If desired a flat gasket of suitable compressible material may be placed in the closure to engage the outer edge of the container.

From this construction it will be seen that this free marginal portion 17 is strongly supported at its lower portion by the doubled flaring walls 14 and 15, but that it is free to yield outwardly and thus cause intimate engagement with the container wall should it be somewhat irregular, or perhaps have some cavities. It will be observed that the doubled flange 14 projects outwardly in the sealed closure, and by applying pressure to the lower doubled edge either by rolling this edge, or by blows to move it inwardly, the free margin will tend to swing outwardly toward the cylindrical wall, and act to release the closure from the vessel.

It will be further seen that the lowermost portion of the container both before applying and afterward, comprises a doubled por-

tion, and this will serve to protect the user and avoid the injury sometimes caused by a free raw edge.

In Figs. 7 and 8 are shown the use of a large ring washer 21 extending down to the free flange or rim 17. When this closure is applied to a vessel, the gasket will be compressed and a portion of it forced down between the rim and the outer wall, while the gasket will be further compressed between the top edge of the vessel and the side and top of the container. This will form a very efficient character of hermetic seal.

In Figs. 9 and 10 I show a closure similar to that of Fig. 3 but in which the free rim or margin is removed at several portions so that it is of a segmental form. But in this modification the rim comprises four segments 22 separated by spaces 23, but the supporting doubled portions 14, and 15 correspond with the other form of closure.

While the several views show my form of closure applied to the form of jar usually termed a jelly glass, it is to be understood that this closure is of equal efficiency when applied to other forms of containers, especially to metal vessels or cans of various kinds. The high degree of resiliency of the free inner rim causes it to have a very secure engagement with the wall of a metallic container.

What I claim is:

1. In a closure for containers, a cap having an annular flange, the lower portion of the flange extending outwardly in a continuous conical form with the edge bent back on the inner face of the conical portion and the free margin beyond the bent portion extending upwardly toward the top, whereby to provide a yielding rim for engagement with the outer wall of the container.

2. In a closure for containers, a cap having an annular flange, the lower portion of the flange extending outwardly in a continuous conical form with the edge doubled back on the inner face of the conical portion and the free margin beyond the doubled portion extending upwardly toward the top and inwardly at a slight angle with the doubled portion, whereby to provide a yielding rim for engagement with the outer wall of the container.

3. In a closure for containers, a cap having an annular flange, the lower portion of the flange extending outwardly in a continuous conical form with the edge bent back on the inner face of the conical portion and the free margin beyond the bent portion extending upwardly toward the top, whereby to provide a yielding rim for engagement with the outer wall of the container, the closure having a gasket lining the inner flange wall above the said inner rim to be compressed by the container edge on application to the container.

4. In a closure for containers, a cap having an annular flange, the lower portion of the flange extending outwardly in a continuous conical form with the edge doubled back on the inner face of the conical portion and the free margin beyond the doubled portion extending upwardly toward the top and inwardly at a slight angle with the doubled portion, whereby to provide a yielding rim for engagement with the outer wall of the container, the closure having a gasket lining the inner flange wall above the said inner rim to be compressed by the said rim and by the container edge on application to the container.

5. In a closure for containers, a cap having an annular flange, the lower portion of the flange extending outwardly in a continuous conical form with the edge bent back on the inner face of the conical portion and the free margin beyond the bent portion extending outwardly toward the top in segmental form whereby to provide independently yielding rim portions for engagement with the outer wall of the container.

6. In a closure for containers, a cap having an annular flange, the lower portion of the flange extending outwardly in a continuous conical form with the edge doubled back on the inner face of the conical portion and the free margin beyond the doubled portion extending upwardly toward the top, in segmental form that make a slight angle with the doubled portion, whereby to provide yielding rim portions for engagement with the outer wall of the container.

7. In a closure for containers, a cap having an annular flange, the lower portion of the flange being formed with the edge doubled back on the inner face of the conical portion and the free margin beyond the doubled portion extending upwardly toward the top in segmental form that make a slight angle with the doubled portion, whereby to provide independently yielding rim portions for engagement with the outer wall of the container.

8. In a closure for containers, a cap having an annular flange, the lower portion of the flange extending outwardly in a continuously conical form with the edge doubled back on the inner face of the conical portion and the free margin beyond the doubled portion extending upwardly toward the top and inwardly at a slight angle with the doubled portion, whereby to provide a yielding rim for engagement with the outer wall of the container, and a closure having a gasket lining the inner flange wall above the said inner rim to be compressed by the container edge on application to the container.

9. In a closure for containers, a cap having an annular flange, the lower portion of the flange extending outwardly in a con-

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ner flange wall above the said inner rim to
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plication to the container.

10. In a closure for containers, a cap hav-
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and a closure having a gasket lining the in-
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be compressed by the container edge on ap- 25
plication to the container.

Signed at New York city, N. Y. on June
26th, 1918.

CHARLES HAMMER.