D. BLOOM.

SHEET METAL CAN.

APPLICATION FILED MAY 23, 1911.

1,030,455. Patented June 25, 1912

FIG. 1

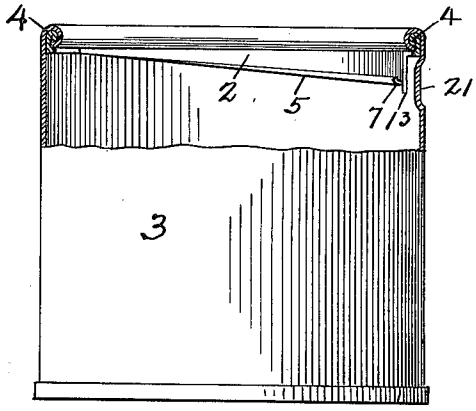
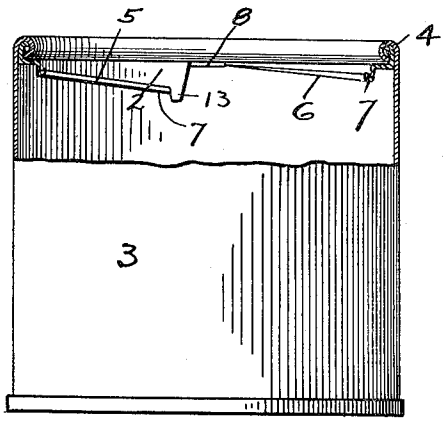


FIG. 2



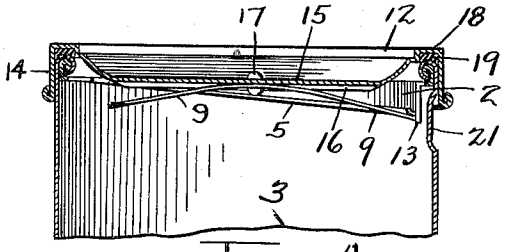


FIG. 4

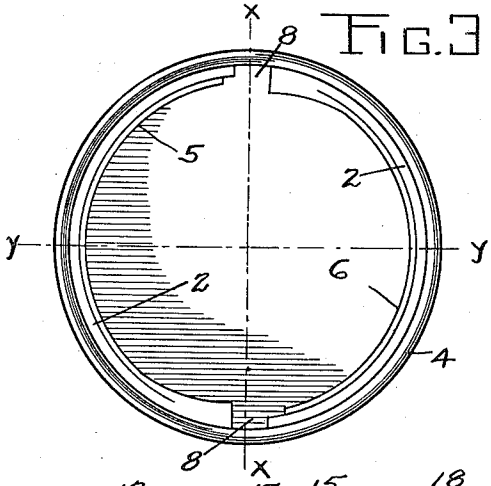


FIG. 3

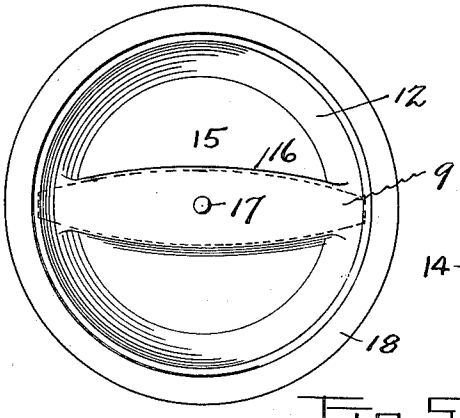


FIG. 5

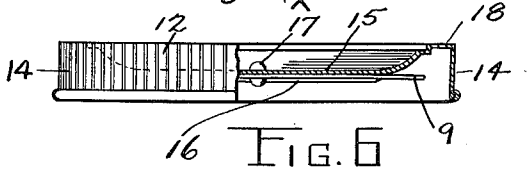


FIG. 6

WITNESSES

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SHEET-METAL CAN.

1,030,455. Specification of Letters Patent. Patented June 25, 1912.

Application filed May 23, 1911. Serial No. 628,907.

To all whom it may concern:

Be it known that I, DAVID BLOOM, a citizen of the United States, and a resident of Berkeley, in the county of Alameda and State of California, have invented certain new and useful Improvements in Sheet-Metal Cans, of which the following is a specification.

The invention relates to sheet metal cans and closures therefor, which are particularly adapted to be used for vacuum sealing.

While I have entitled my invention an improvement in sheet metal cans, I desire it to be understood that I do not limit myself to such construction as the invention may be applied equally well to other types of receptacles which are provided with covers or closures.

The object of the invention is to provide a can provided with a closure which is held to its seat on the mouth of the can by means of an internal spring.

Another object of the invention is to provide a can having a closure which may be held to its seat by different degrees of pressure, depending on the degree of flexure of the spring.

Another object of the invention is to provide a closure which is placed in spring-held engagement with the can by means of a rotation of the closure of the can.

A further object of the invention is to provide a closure which may be secured to the can before the products therein are processed and which has the quality of yielding slightly to allow the expanded air in the receptacle to escape, as the air and contents expand under the action of heat, and which will firmly seat itself on the can when the processing is discontinued and a partial vacuum is formed within the can.

With these and other objects in view, as will more fully hereinafter appear, the invention consists of certain novel features of construction and arrangement of parts, hereinafter fully described, illustrated in the accompanying drawings and particularly pointed out in the appended claims, it being understood that various changes in the form, proportions, size, material and minor details of the structure may be made without departing from the spirit or sacrificing any of the advantages of the invention.

The following description explains at length the nature of my said improvements and the manner in which I proceed to apply the same in the production of a sheet metal can, reference being had to the accompanying drawings.

Figure 1 is an elevation of a can provided with the improvement of my invention, the upper part of the can being shown in section taken on the line *x*—*x* Fig. 3. Fig. 2 is a view similar to Fig. 1 and taken on the line *y*—*y* Fig. 3. Fig. 3 is a plan or top view of the can. Fig. 4 is a vertical section through a part of the can and cover showing the spring for holding the cover in place. Fig. 5 is a plan or top view of the cover. Fig. 6 is a side view of the cover, shown partly in section.

In the drawings I have shown the construction as applied to a sheet metal can, and will confine the particular description to such construction, but it is to be understood that I do not limit myself to such application, as the invention may be applied to other receptacles with equal efficiency.

The can of my invention is provided on the interior adjacent the mouth with two inclined surfaces arranged opposite each other and progressing downward in the same general direction. These inclined surfaces are preferably formed on a separate piece of metal 2, which is attached to the can body 3 at the mouth by being crimped or rolled to the can body as seen at 4. This provides a firm joint between the piece 2 and the can body 3 and stiffens the mouth of the can diametrically.

The piece 2 is stamped to have two inclined edges 5—6 which each extend substantially for half the circumference of the can. The inclined edges 5—6 have the same slope so that the level of two points on the edges, diametrically opposite each other is the same. The edges of the inclined portions may be crimped into a bead 7 to form a smooth bearing surface. The piece 2 is cut away at the points 8, lying between the inclined surfaces, to allow the spring 9 secured to the under side of the cover 12 to pass, so that it may engage the inclined surfaces as the cover is rotated. A stop 13 is provided on the lower edge of the inclined surfaces to prevent a further rotation of the cover when the spring is at its greatest tension.

The cover 12 is preferably provided with a depending flange 14 beaded along the lower edge and milled or knurled on the surface so that it may be readily gripped by

the hand. The body 15 of the cover is depressed so that it lies within the mouth of the can and is provided with a seat 16 for the spring 9. The spring is preferably held to the cover by means of the central rivet 17, the depression 16 serving to prevent the spring from rotating with respect to the cover. The cover is also provided with a seat 18 for the packing 19 which lies between the cover and the can. In order to allow the cover to be raised slightly to relieve the vacuum within the can, when the can is used for preserving by the vacuum process, I provide a slight depression 21 on the can body adjacent the mouth. An instrument can therefore be readily inserted under the cover to raise it slightly to destroy the vacuum before the cover is turned to open the can.

After the material has been placed in the can, the cover is placed over the mouth and rotated. When the ends of the spring register with the apertures 8 the spring drops below the level of the inclined surfaces at the upper end and the further rotation of the cover causes the spring ends to move along the inclined surfaces, thereby flexing the spring and holding the cover against the can. When the spring contacts with the stops 13 further rotation of the cover in that direction is prevented.

Should it be desirable to preserve the contents of the can by the vacuum process, the can is then heated and as the air and contents expand, the cover rises to allow the excess air to escape. After processing the can is cooled and the spring holds the cover tightly against the can while the vacuum is forming.

I claim:

1. In a sheet metal can, an annular member attached thereto at the upper edge and lying within the can, inclined edges on said member, a cover having a depressed central portion lying in line with the upper ends of said inclined edges and provided with a recess on its under face, and a flat spring having its intermediate portion attached to the under surface of said depressed portion of the cover within said recess and having its end portions lying within the can and engaging said inclined edges when the cover is in place on the can.

2. A receptacle having internally arranged inclined edges adjacent to its mouth, in combination with a cover adapted to seat on the upper edges of the receptacle and a flat spring attached at its central portion to the cover and having its end portions adapted to engage the inclined edges when the cover is seated on the receptacle, whereby rotation of the cover causes the spring to bend to vary the pressure of the cover on the receptacle.

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