Oct. 27, 1959 K. SOLHEIM 2,909,803

SNAP-ON HINGE FOR A CONTAINER COVER

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FIG. 1.

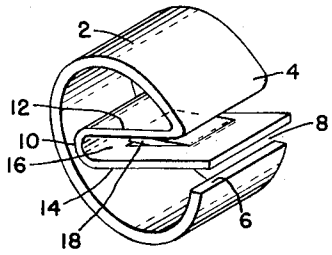


FIG. 2.

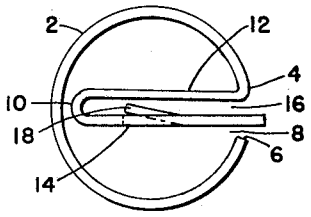
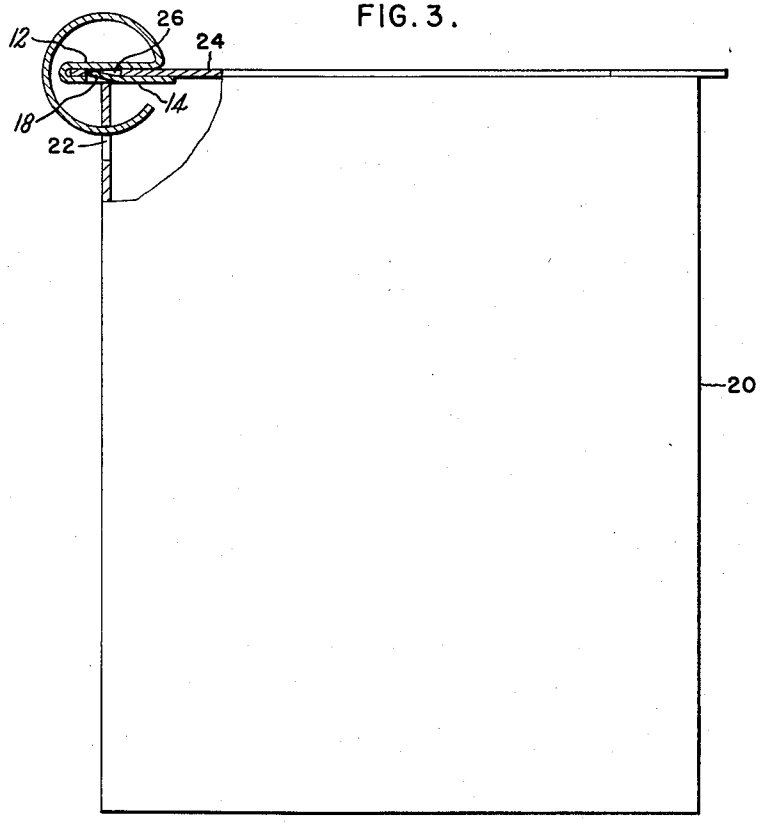


FIG. 3.



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SNAP-ON HINGE FOR A CONTAINER COVER

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2 Claims. (Cl. 16—159)

This invention pertains to a unitary hinge device suitable for use in mounting covers on containers.

It is an object of this invention to provide a novel hinge formed from a single strip of metallic material which may be quickly mounted on a container on which a cover is to be mounted.

It is a further object of this invention to provide a novel unitary hinge device which may be formed out of a resilient metallic material so that a spring action may be present to open or close the cover of a container when it is released and also to hold the cover in its assembled position.

It is a still further object of this invention to provide a novel unitary device which may be easily attached to a container and to which a cover may be mounted without the aid of any special tools or devices.

Briefly, in one form my invention may be fabricated out of a single strip of resilient metallic material and includes a substantially circular section having a gap formed therein. An integral U-shaped section is disposed in the space encompassed by the gap and includes a lug struck out from one of the legs of the U-shaped section. The legs of the U may be disposed close to each other so that a narrow space is defined therebetween into which a cover may be inserted. The substantially circular section is inserted through an opening in the container. The lug on one of the legs is forced into a cooperating opening in the cover to secure the cover to the hinge and the assembly of the cover to the container is thereby completed.

The features of my invention which I believe to be novel are set forth with particularity in the appended claims. My invention itself, both as to its structure and method of assembly, together with further objects and advantages thereof, may best be understood by reference to the following description taken in connection with the accompanying drawing in which:

Figure 1 is an isometic view of one embodiment of my invention;

Figure 2 is a side view of the embodiment illustrated in Figure 1; and

Figure 3 is a sectional side view of an embodiment of my invention assembled on a container and cover with which it cooperates.

Referring now to Figures 1 and 2 of the drawing, I disclose a unitary hinge device embodying my invention which is formed out of a single strip of resilient metallic material such as spring steel and is constituted by a first or arcuate section 2 which has a substantially circular configuration. One end of the arcuate section 2 may be said to terminate at a portion 4 while the other end terminates as shown at 6, so that a gap or opening 8 is presented by the arcuate section. Integrally formed on the arcuate section 2 is a substantially U-shaped section 10, one leg 12 of which constitutes the integral connection with the arcuate section 2. This connection is made at the portion 4. A second leg 14 of the U-shaped section is disposed substantially parallel to the first leg 12 and

extends toward the gap 8. The entire configuration of the device is such that the substantially U-shaped section 10 is disposed in the space encompassed by the arcuate section 2. The legs 12 and 14 define a space 16 which opens into or adjacent the gap 8. A holding means such as a lug 18 is struck out from the leg 14 and extends into the space 16 between the legs 12 and 14 for a purpose to be brought out hereinafter.

As pointed out above, the material from which my unitary hinge device is formed, may be of spring steel. By virute of this construction, the legs 12 and 14 may be formed to be fairly close to one another to aid in the gripping of a cover to be inserted in the space 16 in the manner to be described more fully below. Also, it is obvious that the hinge may be made of any width found desirable and convenient.

In the use of my device, the hinge may be assembled on a container such as shown at 20 in Figure 3 by initially holding the hinge in such a position that the legs 12 and 14 extend approximately parallel to a side wall of the container 20 which has an opening 22 formed below the upper end thereof. In this position, the end 6 of the arcuate section 2 may be inserted through the opening by rotating the hinge so that the side wall of the container passes through the gap 8. The distance of the opening 22 from the top of the container and the length of the gap 8 from the second or lower leg 14 to the end 6 of the arcuate section 2 should be related so that when the hinge is rotated from anything other than a position wherein the legs 12 and 14 are substantially parallel to the side wall of the container, it will not be possible to withdraw the hinge from the side wall as this distance should be greater than the length of gap 8. After mounting the hinge in the side wall container, a lid such as shown at 24 may be inserted into the space 16 until the struck out lug 18 engages in a cooperating opening 26 in the container lid 24. The legs 12 and 14 are shaped so that they converge toward each other as they approach the gap 8. In this manner, when the cover 24 is inserted into the space 16 it will be held by the positive mechanical grip of the cooperating lug 18 and opening 26. Further, the ends of the legs 12 and 14 will also engage the cover to hold it at the point adjacent to gap 8, by virtue of the spring action of the bent or bight portion of the U-shaped section 10. Additional support of the cover may be achieved by extending the lower leg 14 for such distance under the cover 24 as may be desired.

The device thus disclosed affords a simple method of rapidly assembling a moveable cover or closure of any type on a container or receptacle. No special tools are required to complete the assembly and a few simple hand operations are all that is necessary.

While I have shown and described a particular embodiment of my invention, it will be obvious to those skilled in the art that changes and modifications may be made without departing from my invention in its broader aspects and I therefore aim in the appended claims to cover such changes and modifications as fall within the true spirit and scope of my invention.

What I claim as new and desire to secure by Letters Patent of the United States is:

1. A unitary hinge device formed from a single strip of resilient metallic material comprising a first section having a substantially circular configuration having a gap between confronting ends, a second section having a substantially U-shaped configuration formed in part by two spaced legs, said second section having one leg thereof formed integrally with said first section and disposed so as to be encompassed by said first section, said second section being disposed in said first section with both legs thereof extending toward said gap, and a struck-out lug

in one of said legs extending into the space between said two spaced legs.

2. A unitary hinge device formed from a single strip of resilient metallic material and comprising a substantially circular section having a gap formed therein, a substantially U-shaped section formed integrally with said substantially circular section, said U-shaped section being formed in part by two spaced legs, one leg of said substantially U-shaped section constituting the integral connection with said substantially circular section, said substantially U-shaped section being disposed within said substantially circular section, the legs of said substantially U-shaped section terminating adjacent said gap,

and a struck-out lug formed in one of said legs being disposed in the space between said legs and extending away from said gap.

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