March 19, 1940. J. CAMPBELL 2,194,067

POCKET CASE

Filed July 10, 1937

FIG. 1

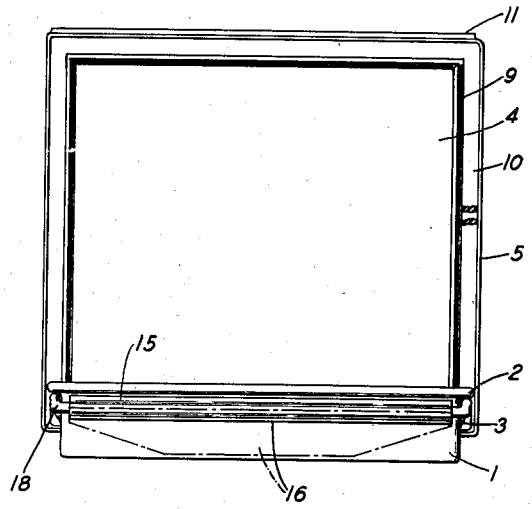


FIG. 2

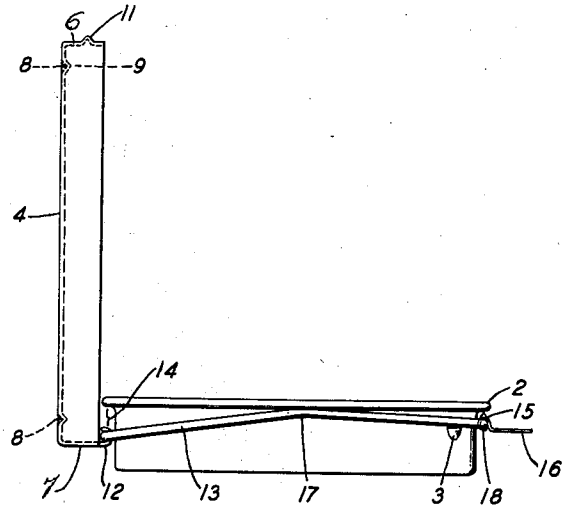


FIG. 4

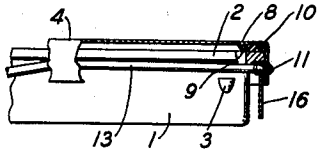
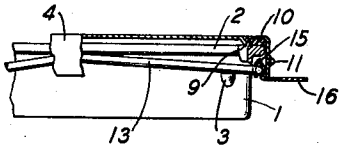


FIG. 3



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POCKET CASE

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8 Claims. (Cl. 220—35)

The instant invention relates to simply and manually closing and opening, automatically hermetically sealing containers for materials having a tendency to deteriorate on contact with moisture or air or either, or tending to sift or leak out.

An object of my invention is to provide a pocket case of simple and inexpensive construction which can be simply latched in its closed position to exclude air and moisture and to prevent leakage or sifting out of the materials.

A further object is to provide a light weight pocket case which may be latched in its closed position and with certain contents, such as cigarettes, will not only keep out moisture but will also float in water.

Still other and further objects are obvious from the description of my preferred construction and the drawing annexed in which:

Figure 1 is a front view of my assembled case with the cover open and at right angles to the lower portion,

Figure 2 an end view thereof,

Figure 3 is an enlarged partial end view showing the forward end thereof partially in section with the latch in its pre-latching position, and

Figure 4 is similar to Figure 3 showing the latch closed.

The lower portion of my improved case 1 is made by stamping, moulding, or casting, preferably in a single operation, out of any light weight material such as aluminum. Integral with the upper edge of the side walls, an externally overhanging rim 2 is provided, and, at a distance from the lower surface of said rim and on each side wall near the front wall, a projection 3 integral with such side walls. The cover 4 is similarly made, preferably in a single operation, of the same light weight material. The side walls 5 and the front wall 6 and rear wall 7 are integral with the cover, and a groove 8 is provided near the edge of cover 4 and near all the walls thereof so that the depressed material projects in the form of a knife edge 9 from the inside surface of the cover. The groove 8 is so positioned that on assembly of the cover to the lower portion of the case, a resilient gasket 10 contacts all of rim 2 of such lower portion. A formed depression 11 is positioned in the lower portion of front wall 6 and extends its entire length. Its position along wall 6 is such that on closure of the case the depression or groove 11 registers with the latching member 15 immediately below rim 2 at the lower front wall. At the lower end of rear wall 7 enough additional length of material is left in the forming operation to provide a pivot or hinge 12 for steel spring 13 extending all around the case. The side arms 13 of the steel spring are given a permanent form about a fulcrum point 17 approximately midway their length, such that when the cover is in its open position the pivot 12 takes a position along the rear wall and the rear portions of the side walls at some distance 14 below rim 2, while along the front wall and the forward portions of the side walls the spring rests on the lower surface of rim 2. The side arms 13 of the spring are so formed that the distance 14 from the lower face of rim 2 exceeds the distance from said face to the upper portion of projection 3. Front portion 18 of steel spring 13 which extends along the lower front wall of the case carries thereon the formed latch 15 having integral therewith a formed flap 16 of thin material to lie flush on the lower front wall of the case when it is latched. Latch 15 and its integral flap 16 are rotatable about such spring portion 18.

The case is assembled by forcing apart somewhat side members 13 of the spring to permit the passage of projection 3 therethrough. As the spring is so formed that it cannot pass over rim 2, the case is thus simply assembled. So assembled, pivot 12 occupies the position indicated at 14 while the forwardly portions of side spring members 13 contacting rim 2 will be out of contact with projections 3, the latter being positioned a distance from the lower surface of the rim greater than the sectional diameter of spring 13, as determined by formed latch 15, the flap 16 being parallel to the front wall of the case. As latch 15 is constructed to project and engage groove 11, obviously it projects beyond rim 2 with the flap 16 in this position and the case cannot be closed. Flap 16 is therefore flicked by the thumb nail or other finger or sharp flat instrument to rotate it about spring portion 18 and takes up a position substantially perpendicular to the lower front wall. By such rotation latch 15 now occupies a position under rim 2 and no longer prevents closing down the cover, while the forwardly portions of side spring members 13 now leave rim 2 and are pushed down over the edges of projections 3 and the rearwardly disposed portions of the spring are brought toward rim 2 of the rear portions of the side walls and of the rear wall. The depending walls 5, 6, and 7, being a snug fit over rim 2, spring 13 and 18, and projections 3, the cover may now be completely closed until it strikes formed flap 16. By such closing resilient gasket 10 rests on rim 2, and, as the closing is against the tension of formed side spring members 13 fulcruming about a point 17 about midway

their length, pivot 12 and the rearmost portions of said side spring members are brought still closer to the respective portions of rim 2, while the forwardly portions of such side spring members are forced down harder onto the increasing taper of projections 3 as shown in Figure 3. If the cover is now released without latching it will fly open under the tension of the side spring members. But having closed down the cover as described, to latch the case flap 16 is now depressed until it is flush against the lower front wall, latch 15 by such rotation entering the formed depression or groove 11 of the front wall of the cover as shown in Figure 4. This forces the gasket into still more intimate contact with the rim, while the tension of the displaced spring is now such that the case remains positively latched in that the rearmost positions of the spring are forced back down the lower case portion 1 again fulcruming about 17. To open the case, the thumb or finger nail, or a thin flat object is inserted between the flap 16 and the lower front wall, whereupon, on flicking the flap upwardly, the case opens assisted by the spring tension. I make the groove 8 in the cover triangular so that projection 9 formed thereby on the inside will permit maximum filling of the case in that, on closing down the cover, no difficulty is experienced by leaving a clearance for this inner wall of the resilient gasket, for its knife edge cuts cleanly into the contents with a minimum of resistance.

I have found that when making my case of aluminum of the size customary for packaging cigarettes in the usual quantities as sold, the latched case with its contents is of such total weight compared to its volume that it floats in water. As on latching rim 2 is forced into resilient liner or gasket 10, the contents are hermetically sealed against air and water and are thus preserved indefinitely without any additional wrapping being required.

My improved case may be made in any manufacturing operation, such as stamping, casting, cutting, moulding, etc., and of any appropriate material, preferably light weight. I realize that various modifications may be made in details without departing from my invention, and I limit myself only as set forth in the annexed claims.

What I claim is:

1. A pocket case made of light weight material comprising a lower portion having walls, outwardly projecting flanges on said walls at their upper edges, stops on said walls spaced from said flanges, a cover with depending walls adapted to cover said flanges and said stops, projections on the interior of said cover and spaced from the depending walls a distance approximately the width of said flanges, a resilient gasket between the inside of said depending walls and projections, a formed spring pivoted at the lower edge of a depending wall and formed so that on assembly with said lower portion the portions of said spring remote from said pivot engage the lower surface of said flanges while the spring portions proximate to said pivot are at a distance from said flanges, said spring encircling said lower portion of the case below the flanges and in its said remote portions above said stops, a latching groove in said depending walls, and a latching element rotatably disposed about a portion of the spring remote from said pivot and comprising a flap and a projection substantially at right angles to each other, the latter projection adapted to engage said groove on closing the cover down against the tension of the spring and rotating said projection about the spring after such closing.

2. In a case a cover depending wall, a groove therein, a spring pivoted on the cover depending wall remote from said groove, a lower wall, an outwardly projecting flange, a pair of aligned stops on said lower wall below said flange and proximate to said groove when said cover wall is closed over said lower wall, said spring encircling the lower wall and formed that when the cover depending wall is open the spring portions remote from said groove are at a distance below the flange while those spring portions proximate to said groove contact the flange, a latching projection rotatable on the spring proximate to the groove, and a depending flap integral with and at substantially right angles to the projection for rotating the projection below and under the flange enabling the cover depending wall to be closed down over the projection to position the groove so that on rotation the projection engages the groove, positively latching the cover depending wall to the lower wall and forcing the spring portion remote from the groove against the flange and the spring portion proximate the groove onto the stops still further than occurs on merely closing down the cover.

3. A case comprising a rectangular lower portion having integral walls, a continuous flange on said walls at their upper edge and projecting beyond the outer surface proper of said walls, a stop on each side wall thereof spaced from said flange and near the front wall, a rectangular cover portion with integral walls depending in the closed position below said stops, a rectangular spring pivoted at its rear side at the lower edge of the rear cover wall, said rectangular spring being so formed that it may be sprung over the stops and in the cover's open position its pivoted rear and the rearward portions of its sides occupy a position a distance below the flange of the lower rear wall and the rearward portions of the side walls while its front side and the forwardly portions of its sides contact respectively the flange at the lower front wall and at the forward portions of the lower side walls, a groove in the upper front wall near its lower edge, and a latching projection rotatably carried on the front spring portion which projection on closing the cover is rotatable under the flange of the lower front wall and when the cover is completely closed is rotatable to engage the groove in the upper front wall latching the case against the tension of the spring sides by retaining the pivoted rear spring portion against the flange at the rear wall and the rearward portions of the spring sides against the rear portions of the flange at the side walls while retaining the forwardly portions of the spring against the stops on the lower side walls.

4. A case comprising a lower portion having front, rear, and side walls, an outwardly projecting flange at the upper portion of said walls, a stop on each side wall positioned below said flange and near the front wall, a cover with depending front, rear, and side walls adapted to enclose said flange and said stops, a spring pivoted to said rear cover wall at its lower edge and encircling said lower portion below said flange and above said stops with the side members of the spring so formed that when the front portion of the spring lies against the lower face of said flange the rear portion of the spring is at a distance from the flange greater than the distance of the stops from the flange, a latching

element on the front wall of said cover, a cooperating latching element on the front portion of said spring and rotatable thereon and adapted on closing down the cover onto the lower portion to latch the cover to the lower portion against the opening tension exerted by the side portions of the spring which on closing the cover down have been displaced upwardly in the rear portion against the flange a distance greater than downwardly in the forward portion against the stops.

5. A container comprising a lower portion having an enclosing wall, an outwardly projecting flange at the upper portion of said wall, a pair of stops on said wall below the flange and in a plane parallel thereto, a cover with a depending wall adapted to enclose said flange and said stops, a spring pivoted to said cover wall at the portion thereof most remote from said stops and encircling said lower portion within and below said flange and above said stops, the spring portions between said stops and the region of said pivoting being so formed that when the proximate portion of the spring is nearest the lower face of said flange the remote spring portion is at a distance from the flange greater than the distance of the stops from the flange, a latch element on said cover, and a cooperating latching element on said spring adapted on closing the cover over said lower portion to be rotated on said spring to the latched position.

6. A container comprising a lower enclosing wall, an outwardly projecting flange at the upper portion of said wall, a pair of stops on said wall below said flange and in a plane substantially parallel thereto, a depending wall adapted to enclose said flange and stops, a spring pivoted to said depending wall at the portion thereof remote from said stops and encircling said lower enclosing wall below said flange and above said stops with the spring portions between the stops and the pivot so formed that when the proximate spring portion is nearest the lower face of the flange the remote spring portion is at a distance from the flange greater than the distance between the flange and stops, a latching groove in said depending wall, and a latching projection rotatable on said spring and adapted on closing said depending wall over said enclosing wall positively to engage said groove on a partial rotation.

7. A container comprising a lower portion having an enclosing wall, an outwardly projecting flange at the upper portion of said wall, a plurality of aligned stops on said wall in a plane below and substantially parallel to said flange, a cover with a depending wall adapted to enclose said flange and said stops, a spring pivoted to said cover wall at the portion thereof remote from said stops and encircling said lower portion below said flange and above said stops, the spring portions between the stops nearest the pivot region and the pivot region being so formed that when the proximate spring portion is nearest the lower face of said flange the remote spring portion is at a distance from the flange greater than the distance between the stops and the flange, a latching element on said cover, and a cooperating latching element on said spring adapted on closing the cover down over said lower portion to be rotated on said spring to the latched position with the remote spring portions against the flange and the proximate spring portions over the stops.

8. A container comprising a lower portion having an enclosing wall, an outwardly projecting flange in the upper region of said wall, a pair of stops on said wall below said flange and in a plane substantially parallel thereto, a cover with depending wall adapted to enclose said flange, a spring pivoted on said cover in the region thereof remote from said stops and engaging said lower portion below said flange and above said stops, the spring portions between each stop and the pivot region being so formed that when the spring portion proximate to the stops is nearest the flange the remote pivoted spring portion is at a distance from said flange greater than the distance between the stops and the flange, a latching element in the proximate portion of said cover, and a cooperating latching element rotatable on the proximate portion of the spring adapted, on complete closure of the cover onto the lower portion and rotation of the element, to latch said cover and portion against the opening tendency of said formed spring tensioned during said complete closure.

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