This invention relates to cartons and containers or to cartons and containers having inner liners or bags of material impervious to moisture, such as used for cereals, brown sugar, flour, potato chips, popcorn, pretzels, and the like, and outer coverings or wrappers, and in particular, a box or container having a liner or bag in which products are sealed, and a cover having sealing elements at the edges whereby after the liner, outer wrapper or inner bag is broken or opened the container is adapted to be sealed by the cover, and wherein the cover and coating sealing elements are adapted to be positioned in the end of a conventional box or container.

The purpose of this invention is to provide a cover for a container or for a container having an inner bag or sealed liner therein in which the container is adapted to be sealed by the cover after a portion of material thereof is removed from the bag or liner.

Containers have been provided with folding ends of various types and designs and various types of sealing elements have been used in the ends of the containers, however, it is difficult to seal a container, particularly of the type having a bag or liner of waxed paper or a plastic material such as used particularly for dry cereals when only a portion of the product is removed from the container. In numerous instances, such as in the use of large containers for dry cereals, potato chips, and the like, it is necessary to open and close the container quite a number of times before a product is used therefrom. With this thought in mind, this invention contemplates a sealing closure adapted to be formed in the end of a bag or container or in the end of a carton having a sealing liner or bag, or in which the closure is adapted to be inserted in the end of a conventional carton or bag.

The object of this invention is, therefore, to provide means for forming a sealing closure for a container having a sealed liner or bag therein whereby products may be sealed from the atmosphere after parts of the products are removed from the container.

Another object of the invention is to provide a sealing cover for containers in which the cover and mounting elements thereof are adapted to be inserted in conventional containers.

A further object of the invention is to provide a sealing closure for a container in which the closing elements are adapted to be formed in the end of a container.

Another important object of the invention is to provide a sealing container having an inner sealed liner or bag therein in which the upper portion of the bag is secured to the inner surface of the carton and also to the closing elements whereby the bag or liner is retained in an upright position until all products are removed therefrom.

A still further object of the invention is to provide a sealing closure for a container in which the device is of a simple and economical construction.

With these and other objects and advantages in view, the invention embodies a carton having a base with a continuous wall or with side and end walls, a closed inner bag or liner of material impervious to moisture positioned in the container, and a continuous liner of material impervious to moisture extended over the inner surface of the side and end walls and also over flaps at the ends of the container. The container may also be provided with a friction ring positioned in one end of the container or made integral with the container and having a covering of sealing material on exposed surfaces thereof, and means for securing the upper portion of a liner or bag to the inner surface of the wall of the container and also to the lower surface of the friction ring or collar. The device may also include a cover having a lining of sealing material and having flanges at the edges positioned to coat with the friction ring or collar to facilitate sealing the end of the container, or a container or bag not inserted in a box or carton having a sealing element enclosing the area of the container to be opened and where-in the area of the container to be opened may be provided with a reinforced section having a score line therearound and with a tab whereby the section is adapted to be removed for opening the bag or sealing liner of the container or wherein the bag or container may be opened by other suitable means.

Other features and advantages of the invention will appear from the following description, taken in connection with the drawings, wherein:

Figure 1 is a plan view of a container showing a friction collar therein.

Figure 2 is a longitudinal section through the upper end of the container taken on line 2—2 of Figure 1 with the parts shown on an enlarged scale.

Figure 3 is a longitudinal section, similar to that shown in Figure 2, showing the parts partially exploded wherein the cover is removed from the friction collar.

Figure 4 is a view similar to that shown in Figure 1 taken on line 4—4 of Figure 3 showing a sectional view through the upper part of the container.

Figure 5 is a cross section through a container taken on line 5—5 of Figure 3 with the sealing cover shown in a partly open position and with a conventional flap providing a cover for the end of the container extended upwardly.

Figure 6 is a cross section through one side of a container with the parts shown on a still further enlarged scale showing the relative positions of the friction collar, sealing cover and bag or sealing liner and showing, in particular, points at which the sealing liner is secured to the container and collar.

Figure 7 is a cross section similar to that shown in Figure 12 illustrating a further modification wherein a sealing filler element with inclined side surfaces and adapted to be frictionally secured in a collar in the upper end of the container is provided on the under surface of the end flap of the container.

Figure 8 is a cross section through a container similar to that shown in Figures 2 and 5 illustrating a further modification wherein V-shaped friction flanges are provided on the under surface of a sealing cover or closure.

Figure 9 is a cross section through a container, showing a further modification wherein the container, which is formed of material impervious to moisture, is provided with an inner sealing panel and the upper portion of the container is closed with a pressure seal friction closure.

Referring now to the drawings, wherein like reference characters denote corresponding parts, the improved sealing container closure of this invention includes a collar or ring having a cover 11 of waxed paper, plastic, metal foil, or other material impervious to moisture positioned in a container having side walls 12 and 13 and end walls 14 and 15, a cover 16 also having a lining, as indicated by the numeral 17, of material impervious to...
moisture and having a continuous flange 18 adapted to be inserted in a slot 19 between the collar 10 and walls of the container and a bag or sealing liner, as indicated by the numeral 26, the upper portion of which is secured by a suitable adhesive to a liner 21 extended around the outer surfaces of the side and end walls as shown at the point 22 and also to the lower surface of the collar 10 as shown at the point 23.

The upper portion of the collar 10 is provided with a beveled or inclined surface 24 and the cover 16 is provided with a similarly shaped section 25 which, with the flange 18 in the slot 19 is in meeting relation with the surface 24. The sealing sheets 11 and 17 extend over the beveled surfaces, the sheet 17 also covering the inner surface of the flange 18, and the sheet 11 extending downwardly through the slot 19, between the outer surface of the collar 10 and inner surfaces of the side and end walls and downwardly to a point 26.

The bag 20 is inserted in an inverted position with the open end extended downwardly which after being filled with material is sealed and the closed end of the bag, which extends upwardly, may be provided with a tab 27 that extends from a card or reinforcing panel 28 whereby with the edges of the panel scored, as indicated by the numeral 29 the section within the scored lines may readily be removed by pulling the tab 27 upwardly. It will be understood, however, that any suitable means may be provided for readily opening the upper part of the bag 20 from the bag liner when it is desired to remove material therefrom.

The sealing liners 11 and 17 are secured to surfaces of the collar 10 and cover 16 with a suitable adhesive, as indicated at the points 30 and 31 in the detail illustrated in Figure 6.

In the section shown in Figure 5, the rear wall 12 of the container is provided with an upwardly extended flap 32 which corresponds with the end of a container particularly as used for cereals and the like. The collar 10 may be provided in the form of an insert and the insert with the cover 16 may be installed in the end of a conventional box or carton, inside of the end wall or flap, such as the flap 32 and, in use, the end wall or flap 32 may be opened, as shown in Figure 5, or removed.

The design illustrated in Figure 8 is substantially the same as that shown in Figures 1 to 6, inclusive, in that a collar 33 having a peripheral flange 34 and a frusto-conical shaped section 35 is positioned in the end of a container 36 with a sealing liner 37, corresponding to the liner 11 positioned against the inner surface of the wall of the container and extended over the flange 34 and frusto-conical shaped section 35. The liner 37 extends over the inner edge of the section 35 and downwardly to point 38 and the outer wrapper is secured, by a suitable adhesive, to the liner 37 between the collar 33 and the side wall 36, or at the upper edge of said side wall.

The collar 33 provides a continuous groove 39 in which a tongue having a wall 40 and an inclined section 41 and covered with a liner 42 is adapted to be pressed and frictionally held. The tongue is positioned on the under surface of a cover 43 and the edge of the cover is provided with a continuous flange 44 that overlaps the upper edge of the section 34 of the collar 33.

A cover, such as the covers 16 and 42, may, therefore, be provided with a tongue, such as the tongue formed with the members 40 and 41, or a flap, such as the flange 18 and a collar, such as the collars 10 and 33 may be positioned in the end of a carton with slots or grooves therein positioned to receive the tongues or flanges. The slots, grooves, tongues and flanges may be of material in different designs in cross section.

It will be understood, therefore, that the combination of a sealed inner container or bag in a container, box or carton with a continuous lining of material impervious to moisture and also with the inner container or bag of material impervious to moisture, may be provided in a box or outer container with end flaps of the outer container and lining patterned in different designs and folded in any suitable manner and particularly with the upper end of the bag or inner container secured by an adhesive to the outer container, may be provided with an inner container in combination with a box or other container, is provided with an inner sealing panel 65 having a continuous flange 66 that is secured by an adhesive or other sealing means to the inner surface 67 of the bag, as shown at the points 68 and 69 and the extended ends 70 and 71 of the sides and ends of the container wall are folded along points 72 and 73, and portions thereof are pressure sealed or provided with a friction closure, as shown at the point 74.

The improved carton or container of this invention, therefore, includes an outer container, an inner sealed container or bag, an outer wrapper or the device may include both the sealed inner container or bag and an outer wrapper formed of material impervious to moisture and positioned with side and end portions of the upper end of the container in combination with a collar or collar adapted to be positioned in the upper end of the container with the under surface thereof secured by an adhesive or the like to the end surface of the bag or inner sealed container and a cover having a tongue or flange adapted to be inserted in a groove or slot of the insert or friction collar whereby after opening the bag or inner container and removing part of the product therefrom the container is adapted to be again sealed by the cover so that products remaining in the inner container are not exposed to the atmosphere and are sealed so that freshness and crispness is retained therein.

The covers of the various types of containers disclosed and described have been described as being retained in the closed position by friction and it will be understood that other sealing means may be used in addition to or in combination with friction for retaining the covers in the closed or sealed position as may be desired.

The inner surfaces of the covers of the different designs and also the contacting surfaces of the collar, form or flange that may be inserted in the end of a carton and secured in position with an adhesive or that may be formed integral with the end of the carton are covered with material impervious to moisture to provide a pressure or friction seal.

It will be understood that other modifications, within the scope of the appended claims, may be made in the design or arrangement of the parts without departing from the spirit of the invention.

What is claimed is:

1. In a sealing closure for a container, the combination which comprises an outer container having side and end walls, an inner container or bag of material impervious to moisture, a collar having a beveled outer surface and a slot in said outer surface positioned in one end of the outer container and a cover having an intermediate panel with a beveled section extended from edges thereof and with a continuous flange extended from the beveled section, said flange of the cover being adapted to be positioned in the slot of the collar, and said bag or inner container being secured by adhesive to the under surface of the collar and inner surfaces of the side and end walls of the outer container.

2. In a sealing closure for a container, the combination which comprises an outer container having side and end walls, an inner container or bag of material impervious to moisture, a collar having a beveled outer surface
and a slot in said outer surface positioned in one end of the outer container and a cover having an intermediate panel with a beveled section extended from edges thereof and with a continuous flange extended from the beveled section, said flange of the cover being adapted to be positioned in the slot of the collar, and said bag or inner container being secured by adhesive to the under surface of the collar and inner surfaces of the side and end walls of the outer container, said collar and inner surface of the cover being coated with material impervious to moisture.

<table>
<thead>
<tr>
<th>References Cited in the file of this patent</th>
<th>UNITED STATES PATENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,147,867 Janisch -------------------------- July 27, 1915</td>
<td></td>
</tr>
<tr>
<td>2,158,448 Wilcox -------------------------- May 16, 1939</td>
<td></td>
</tr>
<tr>
<td>2,286,342 Calva --------------------------- June 16, 1942</td>
<td></td>
</tr>
<tr>
<td>2,290,749 Hildebrandt ---------------------- July 21, 1942</td>
<td></td>
</tr>
<tr>
<td>2,325,922 Sebell --------------- Aug. 3, 1943</td>
<td></td>
</tr>
<tr>
<td>2,326,649 Howard -------------- Aug. 10, 1943</td>
<td></td>
</tr>
<tr>
<td>2,406,758 Gazette ------------ Sept. 3, 1946</td>
<td></td>
</tr>
<tr>
<td>2,434,756 Brooks -------------- Jan. 20, 1948</td>
<td></td>
</tr>
<tr>
<td>2,748,673 Winstead ------------ June 5, 1956</td>
<td></td>
</tr>
</tbody>
</table>