Nov. 29, 1938. M. P. LINK 2,138,252

CONTAINER CONSTRUCTION

Filed March 3, 1936 2 Sheets-Sheet 1

Fig. 1.

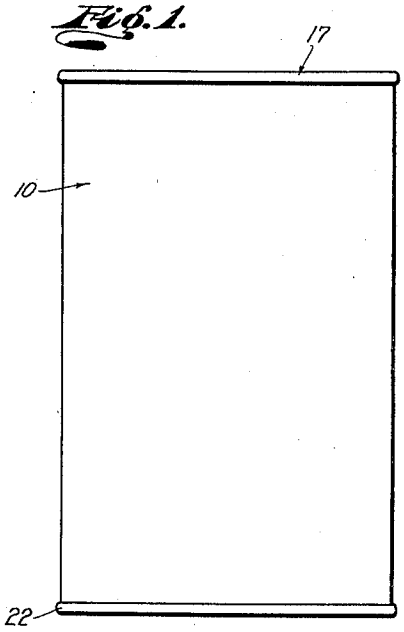


Fig. 8.

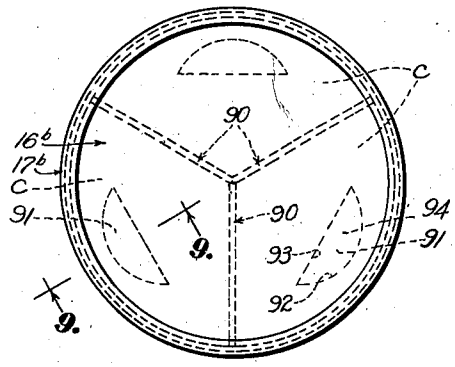


Fig. 9.

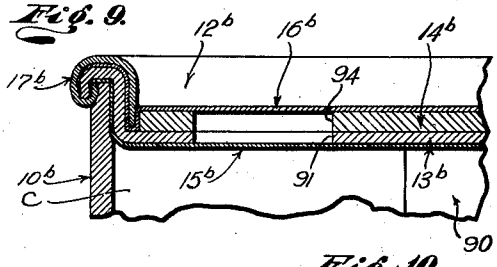


Fig. 2.

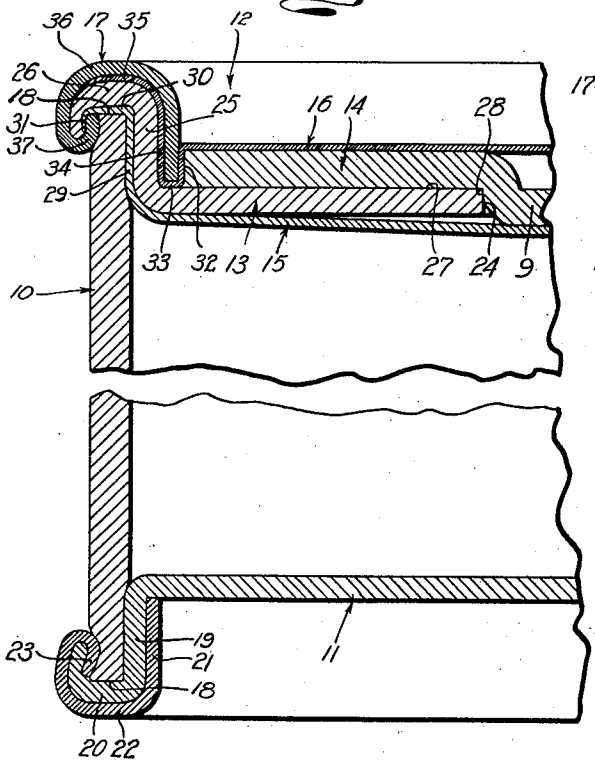


Fig. 10.

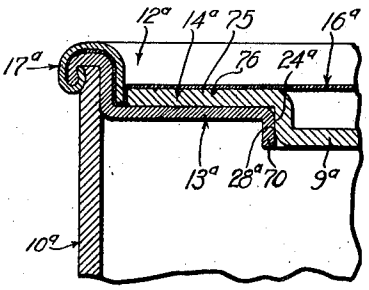
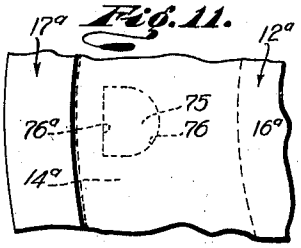


Fig. 11.



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Nov. 29, 1938. M. P. LINK 2,138,252

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Filed March 3, 1936 2 Sheets-Sheet 2

Fig. 3.

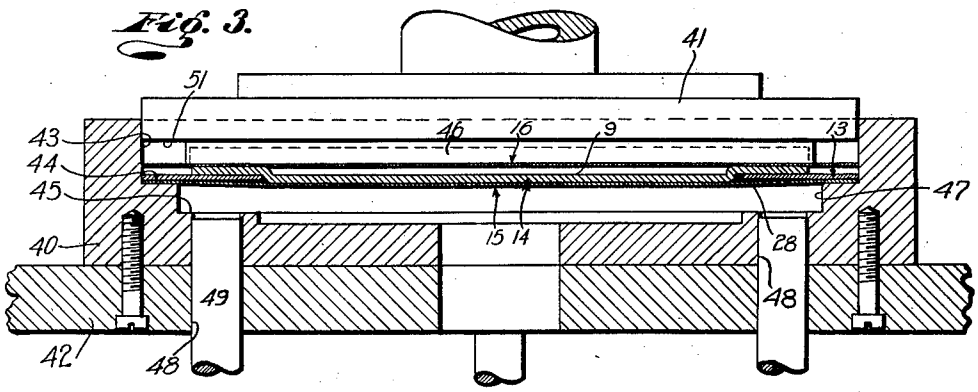


Fig. 4.

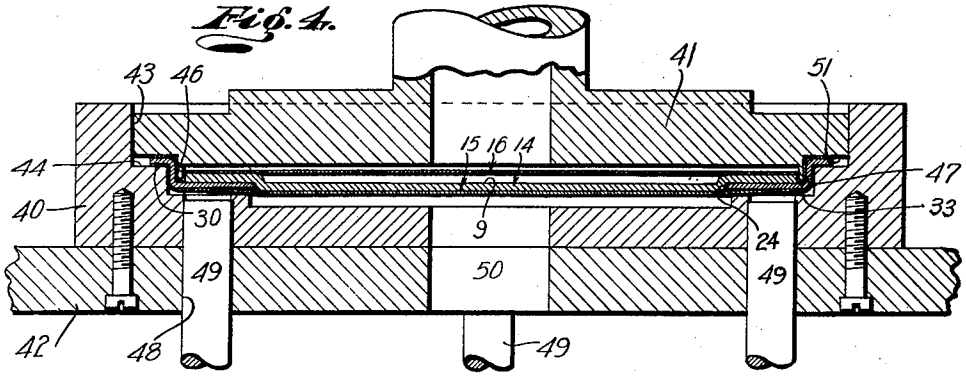


Fig. 5.

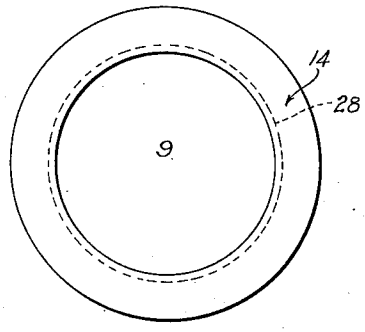


Fig. 6.

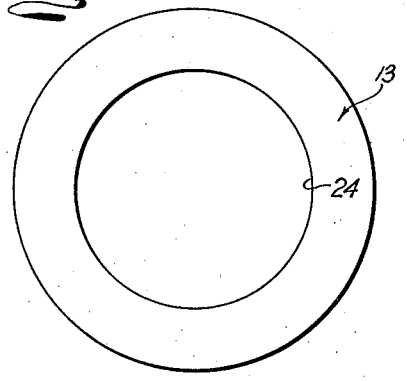
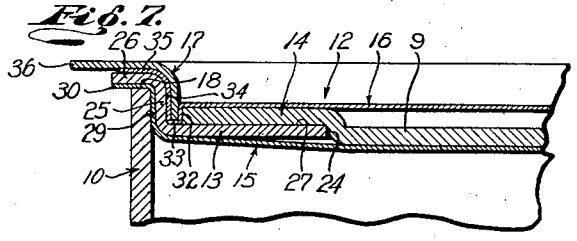


Fig. 7.



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2,138,252

UNITED STATES PATENT OFFICE

2,138,252

CONTAINER CONSTRUCTION

Maximilian Paul Link, Los Angeles, Calif.

Application March 3, 1936, Serial No. 66,828

15 Claims. (Cl. 229—5.7)

This invention relates to containers and relates more particularly to containers formed of paper, cardboard, fiber and other fibrous materials. A general object of this invention is to provide a container embodying a head or closure construction that forms a dependable air-tight and fluid-tight seal and that enhances the appearance of the container.

Another object of this invention is to provide a closure or head construction for a container of the character mentioned that embodies a cover element initially or normally effecting a seal for the container and that is readily removable to give access to the interior of the container without detaching the closure assembly where it is seamed to the container body and without in any way disturbing the seam.

Another object of this invention is to provide a container construction of the character just mentioned in which the removable closure or cover element may be replaced to comprise a convenient removable cover or container top.

Another object of this invention is to provide a container construction of the character mentioned in which an outer frangible diaphragm or seal extends over the removable cover element to retain the same in position, to provide an outer fluid-tight seal about the cover element and to constitute a decorative finish for the closure assembly.

Another object of this invention is to provide a container construction of the character mentioned that may embody a frangible inner seal at the inner side of the removable cover element for protecting the closure assembly against the action of the container's contents, to provide an additional seal and to add to the general novelty and attractiveness of the closure assembly.

Another object of this invention is to provide a container construction in which the several parts of the closure assembly are compactly and neatly associated to form a strong dependable and tight closure.

Another object of this invention is to provide a container construction of the character mentioned in which the ring or part carrying the removable cover element and the inner and outer frangible seals are secured to the wall of the container body without the use of adhesive by a seam ring of metal, or the like, engaging over the end of the container body to grip its external surface and securely and dependably hold the closure parts in place and attach them to the container body.

Another object of this invention is to provide an improved container of the character mentioned in which the aforementioned closure assembly may be permanently or finally seamed to the container body and the bottom closure may be partially or loosely seamed to the container body in a manner to be removable by the packager whereby the container may be filled through the bottom and then closed and sealed by finally seaming said bottom closure to the container body.

Another object of the invention is to provide a container having one or more partitions dividing its interior into compartments and embodying a novel closure allowing inspection and removal of the contents of one or more of the individual compartments without breaking the seals or closures of the compartments not opened.

Another object of this invention is to provide a container construction of the character mentioned in which the closure assembly may be formed and seamed to the container body by simple rapid operations.

The various objects and features of my invention will be fully understood from the following detailed description of typical preferred forms and applications of my invention, throughout which description reference is made to the accompanying drawings, in which:

Fig. 1 is a side elevation of a container embodying the present invention. Fig. 2 is an enlarged fragmentary detailed sectional view of the container illustrating the two closure assemblies. Fig. 3 is a fragmentary cross sectional view of a typical apparatus for forming the elements of the closure assembly illustrating the closure assembly parts in position preparatory to the forming operation. Fig. 4 is a view similar to Fig. 3 illustrating the closure parts after being formed. Fig. 5 is an elevation view of the removable cover or closure element. Fig. 6 is a top elevation of the ring for carrying the closure element before shaping or forming. Fig. 7 is a fragmentary longitudinal detailed sectional view showing the closure assembly in position on the container prior to the seaming operation. Fig. 8 is a top or plan view of a container embodying partitions and a modified form of closure. Fig. 9 is an enlarged fragmentary detailed sectional view taken as indicated by line 9—9 on Fig. 8. Fig. 10 is a fragmentary longitudinal detailed sectional view of a container having another form of closure assembly and Fig. 11 is an enlarged fragmentary elevation of the removable closure element of the construction illustrated in Fig. 10, showing the lifting tab.

The container provided by the present invention includes, generally, a body 10, a closure or head 11 for one end of the body 10, and a closure 12 for the other end of the body 10 comprising a flanged head ring 13, a removable cover or closure element 14 on the ring 13, inner and outer seals 15 and 16, and a seam ring 17 for securing the ring 13 and the inner and outer seals 15 and 16 to the container body 10.

The container body 10 is formed of paper, cardboard stock, fiber board or like fibrous materials or combinations of such materials. The invention contemplates the formation of the body 10 in any configuration. In the particular case illustrated in the drawings the container body 10 is in the form of a cylindrical tube. The opposite ends 18 of the body 10 are preferably flat and normal to the longitudinal axis of the body. The inner surface and, if desired, the outer surface of the body 10 may be treated or coated to be impervious and unaffected by the contents of the container.

The closure or head 11 seals off one end of the tubular body 10. In view of the fact that the closure element 14 of the closure 12 may be removed and replaced in the manner of a cover the closure 11 may be considered as the container bottom or the bottom closure of the container. The head 11 is in the form of a disc shaped part of paper, cardboard or other suitable fibrous materials. The head 11 fits within and engages about the end portion of the container body 10 and its inner surface may be treated or coated to be impervious to and unaffected by the contents of the container. The major portion of the head 11 is flat and lies at right angles to the longitudinal axis of the body 10. A peripheral annular flange 19 projects axially from the head 11 and is adapted to fit within the body 10. As initially formed the flange 19 may be slightly flared to wedge against the internal surface of the body 10. An annular radially or outwardly projecting rim 20 is provided on the flange 19. The rim 20 as initially formed, lies parallel with the body or diaphragm of the head 11 and is adapted to engage against the adjacent end 18 of the body 10 when the head is arranged on the body. The flange 19 and its rim 20 are integral parts of the head 11.

Means is provided to secure or seam the head 11 to the body 10. In the drawings I have illustrated a head retaining construction or seam construction of the character fully described and claimed in my co-pending application entitled Container, Serial No. 48,846, filed November 8, 1935, securing the head to the container body 10. The means securing or seaming the head 11 to the body 10 is such that the head 11 may be partially seamed to the body 10 for delivery to the packager on the body and may then be removed to permit filling of the container 10 following which operation the head 11 may be replaced and finally seamed to the body. This is important as it allows the closure 12 to be finally seamed and secured to the body 10 prior to the filling of the container.

The means securing the head 11 to the container body 10 includes a ring 21 of metal or the like telescoped within the flange 19. The seam ring 21 is adapted to bear outwardly against the internal surface of the flange 19. An outwardly or radially projecting flange 22 is provided on the ring 21 to engage about the lip 20. When the parts are originally assembled on the container body 10 the flange 22 is parallel with the plane of the head 11 and projects radially or outwardly beyond the periphery of the lip 20. In seaming the head 11 to the body 10 the projecting peripheral portion of the flange 22 is curled under the edge portion of the lip 20 and the flange 22 and the lip 20 are curled inwardly toward the body 10. The curled under portion of the flange 22 forms a part 23 on the inner side of the lip 20 which engages or grips against the outer surface of the body 10. The seaming or curling of the flange 22 and the lip 20 tightly draws the lip 20 against the end 18 of the body and causes the lip to be gripped between the part 23 and the flange 22. The wall of the body 10 is gripped or crimped between the part 23 and the flange 19 which flange 19 is in turn engaged or backed up on its inner surface by the ring 21. When the head 11 is first assembled on the body 10 it is preferred to only partially seam or curl the lip 20 and the flange 22 so that the part 23 releasably engages against or grips the body wall. This releasable engagement of the part 23 with the body 10 allows the head 11 to be removed from the body 10 when it is desired to fill the container.

The closure 12 is a feature of the invention as it forms a dependable tight seal for the upper end of the body 10, is attractive and provides or includes the readily removable and replaceable cover element 14. The closure 12 includes the ring 13 for removably supporting and for centering the cover element 14. The ring 13 is formed of paper, cardboard or other fibrous materials or a combination of such materials and may be treated or coated to be impervious to the container's contents. The ring 13 is disposed within the end portion of the body 10 and transverse of the longitudinal axis of the body 10. The opening 24 of the ring 23 is preferably comparatively large in diameter to provide for convenient access to the interior of the body 10 and the free discharge of contents from the body when the seals 15 and 16 have been broken and the element 14 removed. The opening 24 of the ring 13 is preferably concentric with the longitudinal axis of the body 10 and its wall is preferably cylindrically curved. The ring 13 as provided or initially formed is a simple flat member having parallel or horizontal inner and outer surfaces. As assembled on the body, following the forming operation, the ring 13 has an axial outwardly projecting flange 25 adapted to seat in the end portion of the body 10. The flange 25 is annular and is provided at its outer end with an outwardly projecting annular lip or rim 26. As illustrated in Fig. 7 of the drawings the lip 26 is flat and substantially parallel with the body or inner part of the ring 13 when the ring is initially assembled on the body 10.

The removable and replaceable closure or cover element 14 is provided to close and seal off the opening 24 in the ring 13. It is a feature of the invention that the cover element 14 is associated with or related to the ring 13 to snugly and effectively cooperate therewith, to be automatically centered or positioned thereon and to be removably held by the ring when replaced by the user of the container. The cover element 14 is disc shaped and is formed or embossed to cooperate with the upper surface 27 of the ring and the opening 24 of the ring. In accordance with the invention the element 14 has an annular outwardly facing shoulder 28 which seats in and which cooperates with the opening 24. In the simple form of the invention illustrated in the drawings the shoulder 28 is provided by embossing inwardly or depressing a central portion 9 of the

element 14, it being obvious that the element 14 may be given various cross sectional shapes to provide it with the shoulder 28 or its equivalent. As shown, the shoulder 28 is of such depth that the upper surface of the depressed portion 9 is substantially in the same plane as the upper surface 27 of the ring 13, it being understood that the shoulder 28 may be of greater or less depth, as desired. It will be seen that the cooperation of the shoulder 28 with the opening 24 removably holds the element on the ring 13 where it is properly centered or positioned and the cooperation of the shoulder 28 with the wall of the opening 24 effects a seal. The element 14 is positioned so that its periphery is spaced inwardly from the flange 25 when the shoulder 28 cooperates with the opening 24. The inner surface of the cover element 14 or at least, the inner surface of its portion 9 may be treated to be impervious to and unaffected by the contents of the container. The upper surface of the cover element 14 may bear printing, a label, or a decorative covering or the element 14 may be built up or padded to be of any desired thickness and configuration.

The inner seal 15 is provided as a protective or auxiliary seal to prevent contact of the contents of the container with the ring 13 and the element 14 and to add to the novelty and appearance of the closure construction. The seal 15 is in the form of a diaphragm or drum stretched across the interior of the body 10 at the inner surface of the ring 13 and the element portion 9. In accordance with the invention the seal 15 is frangible or readily ruptured following the removal of the element 14 to make the contents of the container accessible or to permit their discharge. The invention contemplates that the seal 15 be formed of relatively thin paper or its equivalent, transparent paper, "Cellophane", or the like. When the element 15 is formed of transparent material the contents of the container 11 are visible through the opening 24 following the removal of the cover element 14 and the opening 24 therefore constitutes a vision window. As initially formed, the seal 15 is a simple flat disc or sheet considerably larger in diameter than the container body 10 and of substantially the same diameter as the ring 13. When the closure assembly 12 has been secured or seamed to the body 10 the frangible seal 15 has a portion 29 held or gripped by the flange 25 and the internal surface of the body 10, a flange 30 gripped between the end 18 of the body 10 and the rim 26 and a peripheral part 31 disposed as will be hereinafter described. The seal 15 thus having its peripheral parts held in the seam of the closure 12 is taut or under tension to bear upwardly against the depressed portion 9 of the cover element 14 and the inner surface of the ring 13. If desired, the inner seal 15 may be dispensed with.

The outer seal 16 is provided to hold the cover element 14 in position so that it cannot become displaced from the opening 24, to form an outer air-tight seal for the container 10, and to add to the appearance of the closure 12 by providing it with a taut smooth surface of the desired color, finish, etc. The outer seal 16 covers the entire outer surface of the cover element 14 and is frangible or readily broken to make the element 14 accessible for removal. The outer seal 16 may be formed of paper, transparent paper, "Cellophane" or like material. In practice, the outer seal 16 may be of any color and may bear printing or decorative matter, labels, etc. The inner surface of the outer seal 16 bears against the elevated peripheral portion of the element 14 and extends across the socket or space at the depressed portion 9. The seal 16 is taut or under tension, its peripheral portion being drawn or formed in the seam of the closure 12. As initially formed or provided, the outer closure 16 may be a simple flat sheet or disc of substantially the same diameter as the ring 14 and the seal 15. When the assembly comprising the closure 12 is seamed to the body 10 the outer seal 16 has a flange 32 drawn between the periphery of the cover element 14 and the ring 17, a flange 33 held between the inner end of the ring 17 and the ring 13, a flange 34 between the opposing surfaces of the ring 17 and the flange 25 and a flange 35 held between the opposing surfaces of the ring 17 and the rim 26 which may or may not extend over the entire outer surface of the rim 26. These flanges 32, 33, 34 and 35 held between the parts just mentioned securely retain the seal 16 in position and under the desired tautness or tension.

The seam ring 17 is provided to attach or secure the assembly of the closure 12 to the body 10. The ring 17 is formed of metal or its equivalent. The body of the ring 17 engages against the flange 33 of the seal 16 being interposed between the flanges 32 and 34 and thus fits between the periphery of the cover element 14 and the flange 25 of the ring 13. The seam ring 17 is provided at its outer end with an annular radially projecting flange 36. As originally formed or provided the flange 36 is flat and at substantially right angles to the body or inner part of the ring 17. The flange 36 is sufficiently large in diameter to extend outwardly beyond the rim 26 and the flanges 30 and 35 when the assembly of the closure 12 is arranged on the container body 10 as illustrated in Fig. 7.

When the closure 12 is secured or seamed to the body 10 the flange 36 is curled or seamed to have a portion 37 curled under the peripheral part of the rim 26 and the flange 36 is curled to bend the rim 26 inwardly toward the exterior of the body 10 and to grip the rim. This curling of the seam ring flange 36 causes the peripheral part of the flange 35 to be tightly gripped between the flange 36 and the rim 26, causes the portion 31 to be tightly gripped between the part 37 and the rim 26, causes the peripheral portion of the rim 26 to be tightly gripped and compressed between the flange 36 and the part 37 and causes the part 37 to clamp against and become embedded somewhat in the external wall of the body 10. Further, the seaming or curling of the flange 36 results in the tight gripping or compression of the flanges 25, 29 and 34 between the body of the ring 17 and the internal surface of the body 10. Accordingly, the seaming or curling of the flange 36 operates to securely attach the several elements of the closure 12 to the body 10, it being understood that the attachment of the seal 16 to the body 10 serves to hold the removable cover element 14 in place on the ring 13.

Figs. 3 and 4 of the drawings illustrate a typical apparatus for forming or shaping the ring 13 and the seals 15 and 16 for assembly on the body 10. It is to be understood that the forming apparatus illustrated in the drawings is merely typical and is not to be taken as limiting or restricting the invention. The apparatus illustrated includes a stationary die block 40 and a movable forming die 41. The block 40 is attached to a suitable support 42 and has a cylindrical recess or socket 43 in its upper side. The

side wall of the socket 43 is stepped having two upwardly facing shoulders 44 and 45. The movable die 41 is shiftable downwardly into the socket 43. An annular downwardly projecting ridge 46 is provided on the under side of the die 41. The ridge 46 is positioned to pass downwardly within the shoulder 44 when the die 41 is moved downwardly and is spaced some distance inwardly from the socket wall or surface 47 extending downwardly from the shoulder 44. Either one or both of the die parts 40 and 41 is preferably heated by suitable means to facilitate the ready forming of the closure parts. Spaced vertical openings 48 are provided in the block 40 and the support 42 and rods 49 are shiftable in these openings. Openings 50 are preferably provided in the block 40 and the die 41 to prevent the formation of a vacuum or reduced pressure during the forming process.

In assembling and forming the closure 12 the assembly of the flat inner seal 15, the flat ring 13, the embossed cover element 14 and the upper flat seal 16 are arranged upon one another in the order named in the socket 43, to rest on the shoulder 44, as shown in Fig. 3. The wall of the socket 43 operates to center the assembly in the block 40. Following the arrangement of the closure assembly in the socket 43 the die 41 is moved downwardly and its ridge 46 contacts the assembly. Downward movement of the ridge 46 against the assembly causes the flange 32 of the outer seal to be drawn against the periphery of the element 14 and causes the flange 33 to be formed against the upper surface of the ring 13. Simultaneously with this shaping of the flanges 32 and 33 the ridge 46 moving downwardly in spaced relation to the surface 47 causes the seals 15 and 16 and the ring 13 to be drawn or shaped between the ridge 46 and the surface 47 to have their respective flanges 29, 34 and 25. The under surface of the die 41 moves downwardly against the assembly to clamp the peripheral portions of the seals 15 and 16 and the ring 13 against the shoulder 44 forming the flanges 30 and 35 and the rim 26. As one or both of the die parts 40 and 41 is heated this shaping of the closure parts is accomplished with a minimum of wrinkling and crinkling of the parts.

Following the shaping or forming of the closure parts the die 41 is moved upwardly and the rods 49 may be shifted upwardly to raise the assembly for ready removal. The flanged seam ring 17 is then placed on the formed assembly so that it seats between the flanges 32 and 34 and its flange 36 bears on the flange 35. The assembly is then placed on the container body 10 as illustrated in Fig. 7 of the drawings and the ring 17 and the rim 26 are seamed or curled downwardly and inwardly toward the body wall, as described above. This seaming or curling effects the tight securing of the closure assembly to the body 10, in the manner described above.

The container illustrated in Figs. 8 and 9 of the drawings comprises a body 10^b, partitions 90 in the body 10^b dividing its interior into several compartments C, and a closure means 12^b for the body 10^b.

The container body 10^b may be similar to the above described body 10. The body 10^b may be formed of paper, cardboard or other fibrous materials and may be coated or treated to be impervious to the container's contents. The lower or bottom end of the body 10^b is closed by a closure (not shown) which may be identical with the closure 11, described above.

The partitions 90 divide the interior of the body 10^b into the several compartments C which may contain various products, the same product, or products of different color, flavor, texture, etc. In the particular case illustrated there are three substantially radial partitions 90 dividing the interior of the container body 10^b into three compartments C. It is to be understood that there may be as many partitions 90 as desired. The partitions 90 may be formed of cardboard, paper or other fibrous material treated or coated to be impervious to the contents of the container. In practice two of the partitions 90 may be formed of a single piece of material bent along a central line and the third partition may be arranged radially in the body 10^b to engage against the first partition at said line. The partitions 90 are clamped between the two end closures of the body 10^b. The compartments C defined by the partitions 90 may be equal in capacity and may extend throughout the length of the body 10^b.

The improved closure means 12^b comprises, an inner closure part 13^b seamed to the body 10^b, an inner seal 15^b at the inner side of the part 13^b, a removable cover element 14^b at the outer side of the part 13^b, and an outer seal 16^b on the outer side of the cover element 14^b.

The closure part 13^b extends across one end portion of the body 10^b and may be a substantially flat disc-shaped element, as illustrated. The part 13^b and the seals 15^b and 16^b are seamed to the body 10^b by a seam 17^b which may be identical with the above described seam embodying the ring 17. In accordance with the invention the part 13^b has access or discharge openings 91 communicating with the compartments C. The openings 91 are preferably in the peripheral portion of the part 13^b. There is preferably one opening 91 communicating with each compartment C. The openings 91 may be of any desired or suitable configuration. In the structure illustrated in the drawings the openings 91 are adapted to receive a teaspoon or the like and have curved outer walls 92 and straight inner walls 93. The openings 91 are shaped and proportioned so that a spoon may be passed through one of them to obtain material from one of the compartments C and the contents of the spoon may be leveled by engaging the mouth of the spoon against the straight wall 93 of the opening as the spoon is removed from the container. The closure part 13^b may be treated or coated to be impervious to the contents of the container.

The inner seal 15^b is provided at the inner side of the closure part 13^b to seal the inner ends of the openings 91. The inner seal 15^b is frangible to be readily broken away at any one of the openings 91 or at all of the openings 91. The inner seal 15^b may be formed of paper, transparent paper, Cellophane or the like. If the inner seal 15^b is formed of a transparent material, the contents of the compartments C may be readily viewed through the openings 91. The inner seal 15^b is a substantially disc-shaped part and its peripheral portion is flanged and secured in the seam 17^b, in the same manner as the inner seal 15, described above. In the event that the compartments C are intended to contain a product or products to be used or withdrawn at the same time, the inner seal 15^b may be omitted.

The cover element 14^b is removably arranged on the outer side of the closure part 13^b and may be replaced after removal to close the openings 91. The cover element 14^b is a flat disc-shaped member of cardboard, paper or the like, fitted

against the outer surface of the part 13b. The cover element 14b may be solid or imperforate to close the openings 91 irrespective of its rotative position. In the form of the invention illustrated the cover element 14b is provided with openings 94 adapted to register with the openings 91. The openings 94 may be of substantially the same shape and size as the openings 91. The removable cover part 14b may carry printing, labels or decorative matter of any character. If desired, the cover element 14b may be initially positioned with its openings 94 in register with the openings 91 so that the contents of the compartments C may be viewed through the openings. After being removed from the container, the cover element 14b may be replaced in a position where its openings 94 are fully out of register with the openings 91. When the cover element 14b is placed in this position it forms an effective closure or cover for the several openings 91.

The outer seal 16b is similar to the seal 16 and operates to hold the removable cover element 14b in place and to provide a secondary or outer seal for the openings 91 and 94. The seal 16b is frangible to be readily broken away or pierces at the openings 94. The outer seal 16b may be formed of paper, transparent paper, cellophane or the like. In the event that the seals 15b and 16b are both formed of transparent material and the openings 91 and 94 are in register the contents of the compartment C may be readily viewed through the openings. The peripheral portion of the outer frangible seal 16b is flanged and secured in the seal 17b in the same manner as the above described seal 16. The outer seal 16b is drawn taut across the outer side of the element 14b to effectively hold it in place.

The container structure illustrated in Figs. 8 and 9 of the drawings may be assembled and used in various manners. The closure means 12b may be first assembled and secured to the body 10b by the seam 17b. The partitions 90 may then be arranged in the desired positions in the container body 10b. If desired, the compartment C may be filled at this time and the bottom closure (not shown) may be finally seamed to the body 10b. In other instances it may be desired to partially seam the bottom closure to the body 10b to allow the packager to remove the bottom closure to fill the compartments C. Following the filling of the compartments C the said bottom closure may be finally seamed to the body 10b. The partitions 90 are such that they are tightly engaged or clamped against by the closure 12b and the bottom closure so that the several compartments C are sealed one from the other.

The compartments C of the container may contain the same product, or products of different characters, or may contain products of different shades, textures, etc. When the closure 12 is assembled with the openings 91 and 94 in registration and when the seals 15b and 16b are transparent, the contents of the compartments C may be easily viewed through the openings. To remove the contents from a compartment C the seals 16b and 15b are broken at the openings 94 and 91 communicating with the compartment. The contents of the opened compartment C may be poured through the openings 90 and 91 or may be withdrawn through the openings by means of a spoon or the like. In the event that the entire contents of the opened compartment C are not used immediately and it is desired to preserve the contents remaining therein, the outer seal 16b may be entirely broken away and the cover element 14b turned to a position where its openings 94 are completely out of registration with the openings 91. When in this position the cover element 14b closes the opening 91. The inner seal 15b remains unbroken or intact at the openings 91 of the unopened compartments C to effectively preserve the contents. The replaceable cover element 14b protects the contents remaining in the opened compartment or compartments. If desired, the seal 15b may be broken at all of the several openings 91 to give access to the several compartments C. The improved closure 12b employed in connection with a container embodying partitions 90 permits the inspection of the contents of the several compartments of the container without disturbing or breaking the seals and is such that the contents may be withdrawn from any one of the compartments without disturbing the seals of the other compartments. The closure 12b is simple and compact and is capable of application to containers of various characters for containing various products.

Figs. 10 and 11 of the drawings illustrate a slightly modified form of closure 12a. The body 10a, the seal 16a, the ring 17a and the several flanges at the seam between the closure 12a and the body 10a may be identical with the corresponding elements of the previously described form of the invention. The structure illustrated in Figs. 10 and 11 of the drawings differs from that in Figs. 1 to 7, inclusive, in that the ring 13a has a downwardly projecting annular flange 70 at its opening 24a and the shoulder 28a of the embossed cover element 14a is of greater axial extent to have extensive cooperation with the internal surface of the flange 70. This extensive engagement of the shoulder 28a with the internal surface of the flange 70 provides a more effective seal and a firmer engagement between the ring 13a and the removable cover element 14a.

A lifting tab 75 may be provided on the removable cover element 14a it being understood that such a tab or its equivalent may be provided on the cover element 14 previously described. The tab 75 is intended to be lifted and engaged to facilitate the removal and handling of the element 14a. The invention contemplates that the tab 75 may be varied in character. The tab 75 may be in the nature of a part secured to the element 14a by adhesive, an integral flap of the element formed by making a curved or U-shaped partial cut 76 in it with a line of scoring 76a extending between the arms or ends of the cut, or the tab may be a separate part secured to the element 14a by a metal clip. In the case illustrated the tab 75 is such that it normally lies flush with the upper surface of the cover element 14a. The tab 75 may be lifted from its outer end to pivot or hinge at the line 76a of scoring to be readily grasped whereby the element 14a may be lifted from the ring 13a.

It is believed that the utility and practicability of the container construction provided by the present invention will be readily apparent from the foregoing detailed description. Referring to the form of the invention illustrated in Figs. 1 to 7, inclusive, of the drawings, it will be noted that the container is sturdy and compact and embodies seams which are relatively small. The metal rings 21 and 17 strengthen and reinforce the seams and lend rigidity to the general container structure. The closure 12 is novel in that it embodies the removable cover element 14 which is normally fitted on the ring 13 to form a nested part of the closure and yet is readily removable

to allow for the discharge or removal of the contents from the container 10. The shoulder 28 of the element 14 cooperates with the opening 24 to position the element on the ring 13 and to removably hold the element 14 in place. The outer seal 16 also serves to hold the cover element 14 in position and forms an outer air-tight closure.

The container may be assembled and filled as described above, that is, the closure 12 may be assembled and finally seamed to the body 10 and the closure 11 may be partially seamed to the body so that it may be readily removed to permit the container to be filled through its lower end following which filling the closure 11 may be finally seamed to the body 10. To open the container the outer frangible seal 16 is first broken, giving access to the removable cover element 14. In practice the outer seal 16 may be easily ruptured above the depressed central portion 9 of the element 14 and torn away making the element 14 easily engageable for removal. When the cover element 14 has been lifted from the ring 13 the inner seal 15 is exposed and accessible through the opening 24. The inner seal 15 may be easily broken or ruptured to give access to the interior of the container or to allow the removal of its contents. It is to be noted that the breaking of the seals 15 and 16 does not loosen the seam securing the ring 13 to the body 10. The cover element 14 may be readily replaced where it rests on the ring 13 and has its shoulder cooperating with the opening 24. This cooperation of the shoulder 28 with the opening 24 acts to removably hold the cover element 14 in its closed position. When the removable cover element is provided with the tab 75 it is easily engaged and handled. The container construction of the present invention is particularly attractive and convenient and is adapted for embodiment in containers for holding various substances such as face powder, etc.

Having described only typical preferred forms and applications of my invention, I do not wish to be limited or restricted to the specific details herein set forth, but wish to reserve to myself any variations or modifications that may appear to those skilled in the art or fall within the scope of the following claims.

Having described my invention, I claim:

1. In a container having a tubular body, the combination of, a fibrous ring having a flange engaging over an end of the body, a metal seam ring gripping the exterior of the body and engaging about the flange to force it against the interior of the body, and an embossed cover element on the fibrous ring having a shoulder removably fitting the opening of the fibrous ring.

2. A container comprising, a body, a fibrous ring having a flange wrapped over an end of the body, a metal seam ring gripping the exterior of the body and the flange to clamp the flange on the body, and a removable cover element seated on the fibrous ring and having an inwardly extending shoulder cooperating with the opening of the fibrous ring to removably hold the element in position.

3. A container comprising, a fibrous body, a fibrous ring having a flange fitting into the body and a rim on the flange extending over the end of the body to the exterior of the body, a metal seam ring engaging about the rim and flange gripping the exterior of the body and holding the rim against the exterior of the body and the flange against the interior of the body to secure the first named ring to the body, and a removable cover element seated on and closing the first mentioned ring.

4. A container comprising, a fibrous body, a fibrous ring having a flange extending over the end of the body to the exterior of the body, a metal seam ring engaging about the flange and gripping the exterior of the body to secure the first named ring to the body, and a removable fibrous cover element seated on the first named ring to close its opening and having an annular shoulder cooperating with said opening.

5. In a container having a fibrous body, the combination of, a fibrous ring in the body having a flange engaging over an end of the body, a removable cover element closing the ring, a frangible seal engaging over the outer side of the cover element, and a metal seam ring seaming the flange and the seal to the body.

6. In a container having a fibrous body, the combination of, a fibrous ring in the body having a flange engaging over an end of the body, a removable cover element closing the ring, a frangible seal engaging over the cover element and said flange, and a flanged seam ring engaging over the flange to clamp the seal thereon and gripping the exterior of the body to secure the ring and seal to the body.

7. In a container having a fibrous body, the combination of, a fibrous ring in the body having a flange engaging over an end of the body, a removable cover element arranged on the ring to close the opening therein, a frangible fibrous seal covering the element and engaging over the flange, and a seam ring interposed between the periphery of the first named ring and the flange to hold the seal taut and having a flange engaging over the first named flange through the medium of the seal to clamp the seal thereon and gripping the outside of the body.

8. In a container having a body, the combination of, a ring in the body having an inturned portion lying in a plane substantially transverse of the longitudinal axis of the container body in which the opening of the ring is formed, a removable cover resting inwardly against said portion and having a shoulder cooperating with the opening therein to hold the cover in position, a frangible seal engaging the outer side of the cover and holding the cover on the ring, and means securing the ring and seal to the body.

9. In a container having a body, the combination of, a ring in the body, a removable cover on the ring having a shoulder cooperating with the opening therein to hold the cover in position, a frangible seal engaging the outer side of the cover and holding the cover on the ring, a frangible seal for the opening in the ring, and means securing the ring and the seals to the body.

10. In a container having a body, the combination of, a ring in the body, a removable cover on the ring having a shoulder cooperating with the opening therein to hold the cover in position, a frangible seal engaging the outer side of the cover and holding the cover on the ring, a frangible seal extending across the interior of the body at the inner side of the ring to seal the opening therein, and a single seam ring securing the first named ring and both of the seals to the body.

11. In a container having a body, the combination of, a ring in the body having a flange extending about the adjacent end of the body, a removable cover element on the ring closing its opening and having a shoulder fitting said opening, an outer frangible seal on the outer side of the element engaging over said flange, a seam ring

interposed between the periphery of the element and the flange to draw the outer seal between the same and hold it taut, and a flange on the seam ring engaging about the first mentioned flange through the medium of the outer seal and having a part curled about the periphery of the first mentioned flange and gripping the outer side of the body.

12. In a container having a body, the combination of, a ring in the body having a flange extending about the adjacent end of the body, a removable cover element on the ring closing its opening and having a shoulder fitting said opening, an outer frangible seal on the outer side of the element engaging over said flange, an inner frangible seal extending across the interior of the body at the inner side of the element and ring and having portions held between the flange and the interior and the end surfaces of the body, a seam ring interposed between the periphery of the element and the flange to draw the outer seal between the same and hold it taut, and a flange on the seam ring engaging about the first mentioned flange through the medium of the outer seal and having a part curled about the periphery of the first mentioned flange and gripping the outer side of the body.

13. In a container having a body, the combination of, a ring in the body having a flange extending about the adjacent end of the body, a removable cover element on the ring closing its opening and having a central depressed portion providing a shoulder fitting said opening, an outer frangible seal on the outer side of the element engaging over said flange, a seam ring interposed between the periphery of the element and the flange to draw the outer seal between the same and hold it taut, and a flange on the seam ring engaging about the first mentioned flange through the medium of the outer seal and having a part curled about the periphery of the first mentioned flange and gripping the outer side of the body.

14. In a container having a fibrous body, the combination of, a fibrous ring in the body lying in a plane transverse of the longitudinal axis of the body, a fibrous cover element on the ring, the cover element having extensive engagement inwardly against the outer surface of the transverse ring and having an annular shoulder spaced from its periphery cooperating with the opening of the ring to provide a seal and to hold the element in position, a lifting tab on the element, and means securing the ring to the body.

15. In a container having a body, the combination of, a fibrous ring in the body, an inwardly projecting rim on the ring around its opening, a removable cover element on the ring having an annular shoulder cooperating with the rim to provide a seal and to hold the element in position and a metal seam ring securing the fibrous ring to the body.

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