Nov. 28, 1950 E. W. LAGER ET AL 2,531,914

METHOD AND MECHANISM FOR CLOSING FIBER CONTAINERS WITH A LINED CLOSURE

Filed Feb. 1, 1945 5 Sheets-Sheet 1

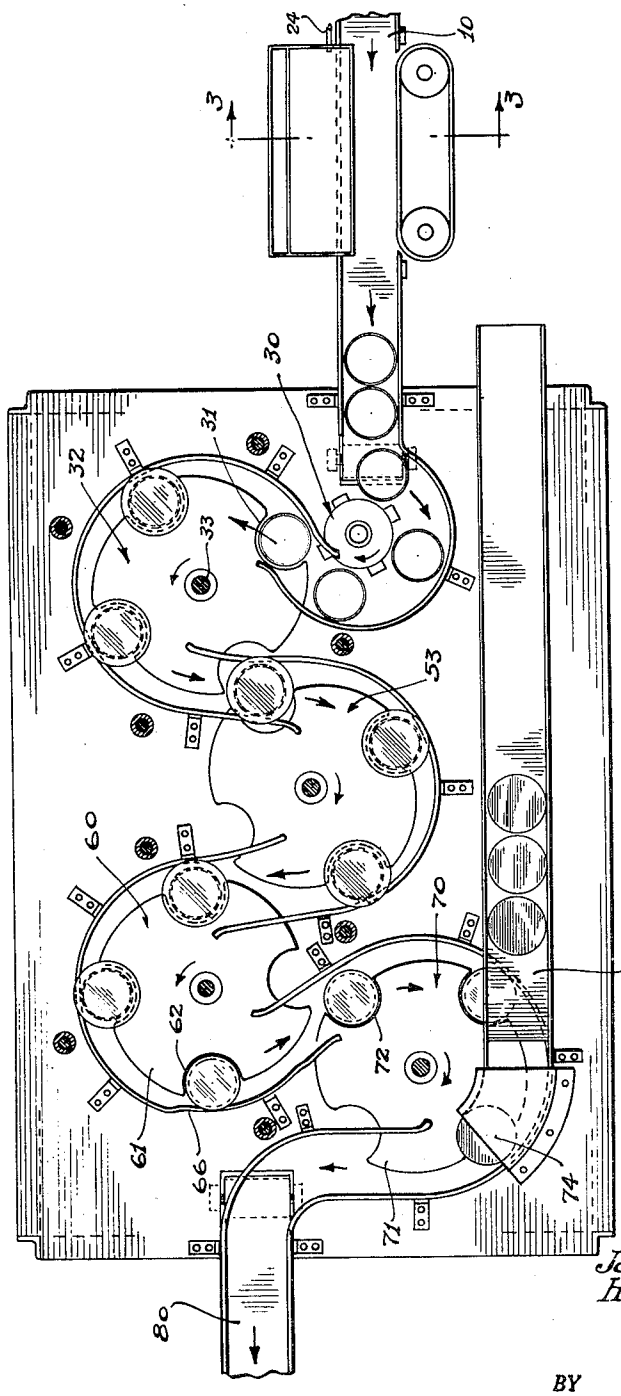


Fig. 1

Eric W. Lager,
James J. Prohaska and
Heinrich E. Haase
INVENTORS

BY R. G. Story

ATTORNEY

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METHOD AND MECHANISM FOR CLOSING FIBER CONTAINERS WITH A LINED CLOSURE

Filed Feb. 1, 1945 5 Sheets-Sheet 2

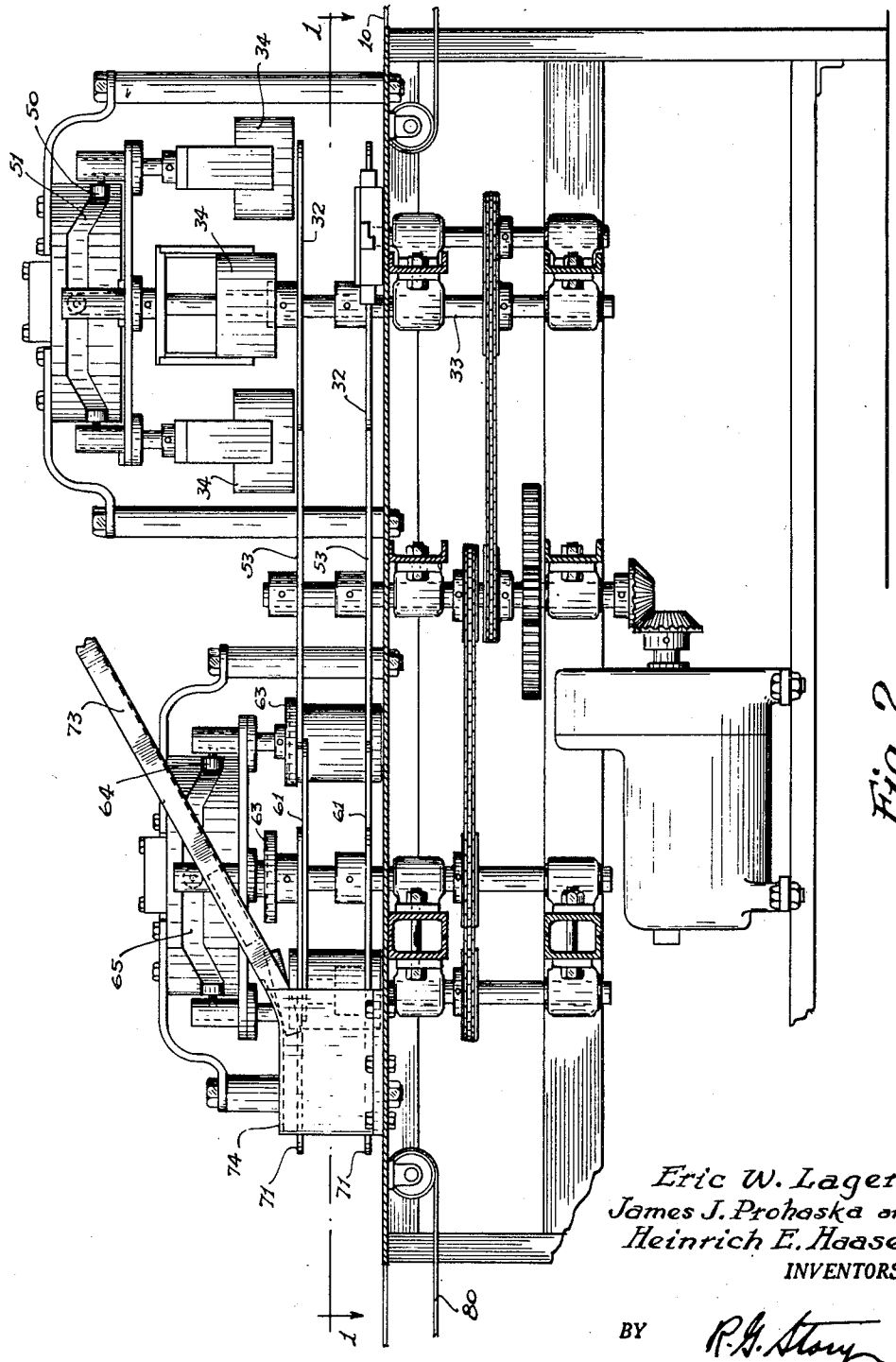


Fig. 2

Eric W. Lager,
James J. Prohaska and
Heinrich E. Haase
INVENTORS

BY R. G. Story
ATTORNEY

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Filed Feb. 1, 1945 5 Sheets-Sheet 3

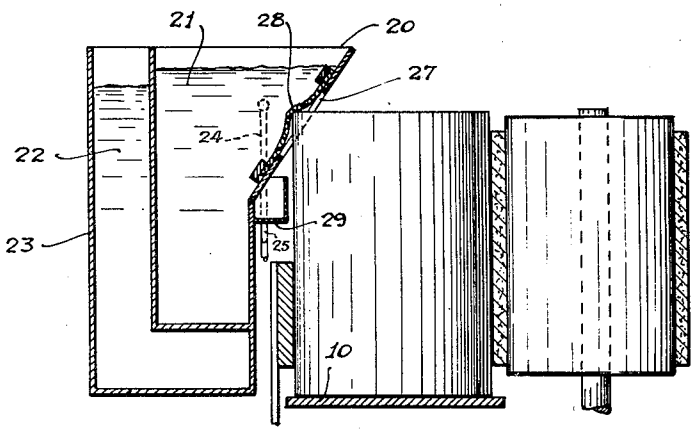


Fig. 3

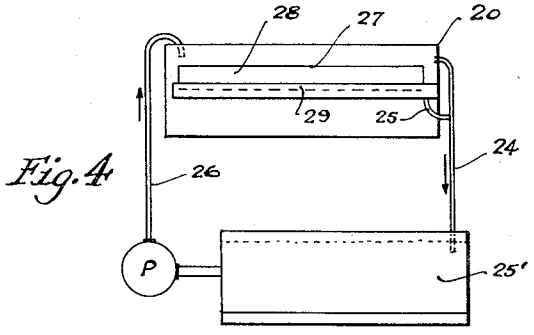


Fig. 4

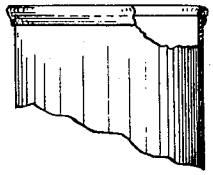


Fig. 5

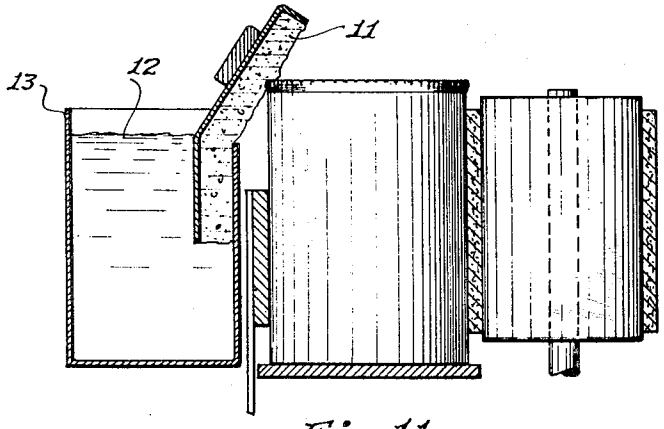


Fig. 11

Eric W. Lager
James J. Prohaska and
Heinrich E. Haase
INVENTORS

BY R. H. Story
ATTORNEY

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METHOD AND MECHANISM FOR CLOSING FIBER CONTAINERS WITH A LINED CLOSURE

Filed Feb. 1, 1945 5 Sheets-Sheet 4

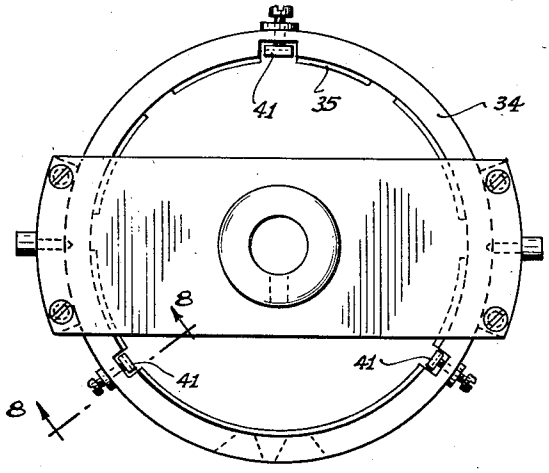


Fig. 6

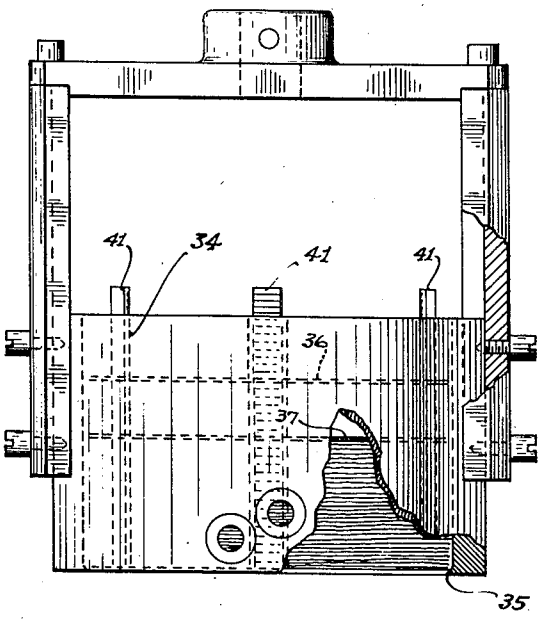


Fig. 7

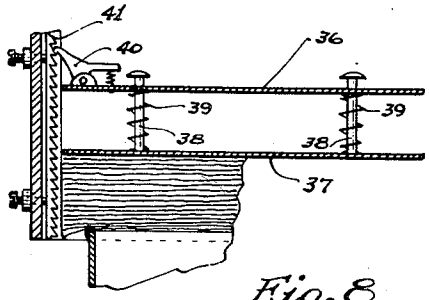


Fig. 8

Eric W. Lager
James J. Prohaska and
Heinrich E. Haase
INVENTORS

BY R. H. Story
ATTORNEY

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METHOD AND MECHANISM FOR CLOSING FIBER CONTAINERS WITH A LINED CLOSURE

Filed Feb. 1, 1945 5 Sheets-Sheet 5

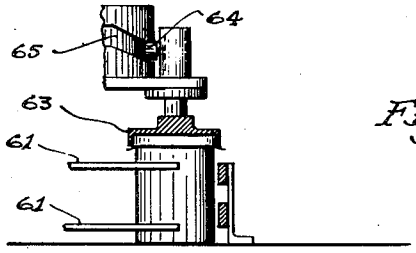


Fig. 9

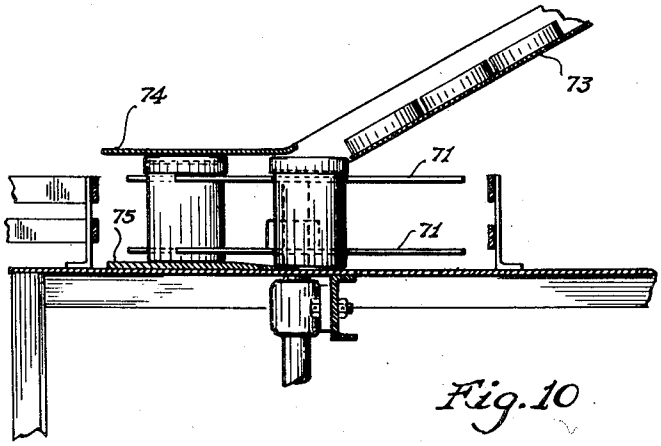


Fig. 10

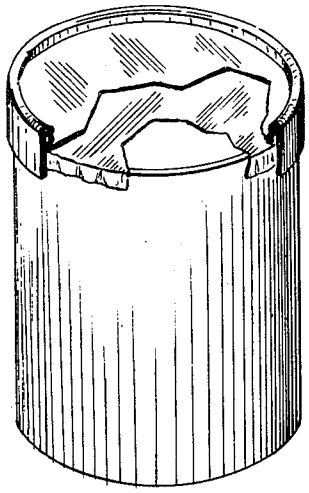


Fig. 12

Eric W. Lager
James J. Prohaska and
Heinrich E. Haase
INVENTORS

BY R. G. Story
ATTORNEY

Patented Nov. 28, 1950

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UNITED STATES PATENT OFFICE

2,531,914

METHOD AND MECHANISM FOR CLOSING FIBER CONTAINERS WITH A LINED CLOSURE

Eric W. Lager, Palos Park, James J. Prohaska, Palos Heights, and Heinrich E. Haase, Chicago, Ill., assignors, by mesne assignments, to Swift & Company, a corporation of Illinois

Application February 1, 1945, Serial No. 575,682

22 Claims. (Cl. 226—80)

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This invention relates to packaging machinery and more particularly to a machine for capping a generally cylindrical fiber container.

It is an object of this invention to provide a machine for producing a tacky bead around the open end of a container, applying a liner over the open end, and placing a cap over the liner to close the container.

It is another object of this invention to provide an improved packaging means for sealing a shortening product in a fibrous container.

Other objects will appear from the specification below.

Figure 1 represents a plan view of the machine forming the subject of this invention, taken on line 1—1 of Figure 2 but showing the containers,

Figure 2 is a sectional side elevation of the machine shown in Figure 1, with the guide walls around the various working stations omitted,

Figure 3 is a view taken on line 3—3 of Figure 1 showing a means for applying a molten gelatin containing solution to the rim of a fibre container,

Figure 4 is a diagrammatic view of the solution flow system for maintaining the solution in a fluid condition,

Figure 5 is a side elevation partly broken away showing, in exaggerated relation, a container having a tacky bead produced around its open end,

Figure 6 is a top plan view of a liner supply device,

Figure 7 is a side elevation partly broken away showing the liner supply device of Figure 6,

Figure 8 is a sectional view taken on line 8—8 of Figure 6 showing a container positioned with its tacky bead in contact with the lowermost liner in the supply reservoir,

Figure 9 is a detailed view partly broken away showing the liner crimping means about to engage a liner positioned on the tacky bead of a container,

Figure 10 is a detailed view showing the cap feed and capper mechanism,

Figure 11 is a view taken on line 3—3 of Figure 1 showing modification of means to produce a tacky bead on the container in the form of a water reservoir useful for moistening a gelatin bead previously applied to a container, and

Figure 12 is a perspective view partly broken away showing a container having a liner and cap applied thereto.

Recently, the problem of handling of shortening materials packed in paper containers has arisen

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and the present invention is concerned with the provision of a neat package for shortening products and machinery for assembling the package. Heretofore no successful packaging method has been found nor has any machine been available to handle fibre containers of relatively large size to accomplish the rapid mechanical placement of a cap on preformed fiber container.

The machine here disclosed is designed to apply a cap to such a fiber container and, further, a packaging method is disclosed wherein a liner is first applied over the open end of the container so that the contents of the container cannot escape to spread over the outside of the container where it may become rancid and otherwise render the package unattractive.

Containers for holding three pounds of shortening and upwards are now being used for the distribution of this type of product and the open ends of such fibrous containers have sometimes been coated with a bead formed of a mixture of edible gelatin and glucose, to prevent the shortening material from being absorbed in the raw edges of the container. These raw edges are produced during the manufacture of a paper can body when the edges are trimmed to form the individual bodies, and the fatty material which is absorbed in these edges spreads through the body thus rendering the package upsightly as the oil smear spreads. The gelatin bead applied around the edges of the end of the body, coats the raw edges and prevents spreading of the oil through the paper. The provision merely of a gelatin bead will not, of course, prevent shortening from working up over the edge to spill down the outside, and it has been found in practice that the oily material which sometimes engages against the top of a closed container works out between the cap skirt and the carton.

In addition to detracting from the appearance of the package, the spreading of oil over the surface of the container creates a condition which promotes the tendency of the fatty material to become rancid. Due to the exposure of a large area of fatty material to oxygen, rancidity is produced along with the odor characteristic of this condition which further materially detracts from the value of the package.

The invention disclosed herein makes use of the gelatin containing or other greaseproof bead applied around the open end to effect a more efficient sealing of a fiber container and in following this teaching the bead is rendered tacky during the closing of a filled container in order to adhere an oil-proof liner to the tacky bead. As the bead

dries the liner is fixed in position to close the container to seal the shortening in the package and yet the bead still performs the function of preventing fatty material from being absorbed into the wall. A cap is adapted to be then applied over the liner to cover the open end of the container and in one form of the invention the cap is utilized to wipe the periphery of the liner against the walls of the container.

In addition to means for producing a tacky gelatin bead on the container, the machine also includes means for applying the thin flexible liner to the can wherein the tacky bead is utilized to withdraw a liner from an overhead supply. The liner supply and container are moved relatively to each other so that the tacky bead is driven into firm contact with the liner supply so that the lowermost liner is firmly engaged on the bead. As the liner supply and container are retracted relatively, the lowermost liner remains on the can body and is withdrawn from the supply.

The partially applied liner is then delivered to crimping means to crease the liner around the upper end of the can, or the partially completed package may be delivered directly to a capping means. The container with a liner applied thereto is completed by the application of a skirted cap of substantially the same construction as the fibrous container, and such caps are applied to the container in two stages. Due to the depth of the skirt formed on the caps, the cap is first arranged concentrically over the can with the skirt just neatly applied over the open end of the container. After the cap has thus been initially placed in position, the container and cap are then forced together relatively so that the cap is driven home on the container to complete the package.

A more specific embodiment of the invention is shown in the drawings and described below, wherein the filled containers are delivered to the capping machine on the conveyor **10**, Figure 1, and in passing to the machine each of the containers has a tacky bead produced around the open end thereof. When using the type of container where a gelatin bead has previously been applied to the raw edge of the generally cylindrical container, the upper edge of the container is rolled against a moistened sponge, felt, or other wicklike material as best shown in Figure 11. When the gelatin bead is forced into contact with the moist sponge, the bead of glucose and gelatin is wetted and quickly becomes tacky.

If it is desired to fill the containers before coating the gelatin solution on the edge of the container, means must be provided to effect its application. This gelatin applicator may take the form shown in Figure 3 in which a reservoir **20** is provided having a body of molten gelatin **21** disposed therein. The gelatin solution is maintained in a molten state by the hot water **22** in jacket **23** and also by recirculation through pipes **24** and **25** to a gelatin solution heating tank **25'**, as shown in Figure 4. The gelatin solution is continuously circulated from the gelatin tank through pipe **26** to the reservoir **20** so that the main body of the gelatin solution **21** is maintained in the molten condition. The front side of the gelatin reservoir **20** is preferably inclined outwardly as shown in Figure 3 and has a window **27** in the inclined portion of the wall that is covered with a cloth sheet **28**. The cloth sheet is preferably formed of linen or some similar loosely woven material so that the molten gelatin solution maintained in the reservoir will slowly ooze through the pores of the cloth to collect as a film on the outside of the cloth window covering.

It has been found, that the molten gelatin solution which collects on the outside of the cloth window covering, may be wiped onto the upper edge of a container to provide a bead of just the right size for the present purposes, and since the solution is molten, it will be quite tacky. The bead thus applied may be utilized to effect application of a liner as well as seal the raw edge of the container as explained above. If a cylindrical container is being used, the bead can be applied by a rolling action as clearly shown in the drawings. Any excess gelatin solution flowing down the outside of the cloth window covering **28** is collected in the overflow trough **29** from where it flows into pipe **25** to be delivered to the melting tank for the gelatin solution.

Whether the tacky bead is produced by wetting the edge of a container having a gelatin bead previously applied thereto or by applying a molten gelatin solution to the container after it has been filled, the bead will take a form substantially as shown in Figure 5. The bead is disposed generally over the top edge of a side wall of the container to seal the raw edge and extends slightly down the outside of the wall.

The can thus treated is then carried further along by conveyor **10** and is delivered into a star wheel or timer **30** which delivers the containers into position to be picked up by the pockets **31** of the turret **32**. The turret **32** may be formed of two spaced apart plates as shown in Figure 2 and the turret is driven from shaft **33** adjacent the upper end of which the liner supply cages **34** are mounted. The turret and liner supply cages rotate as a unit and the pockets **31** are disposed under the liner supply cages **34** in alignment therewith so that the liner supply cages may be moved down onto the upper end of a container in pocket **31** to bring the lowermost liner in the liner cage in contact with the tacky bead.

The construction of a liner cage or supply means is best shown in Figures 6, 7, and 8 and, as there seen, the cage is provided with a lower open end having an inturned lip **35** substantially surrounding this opening. The liners to be placed on the containers are of a dimension to completely cover the open end of the container and have a portion thereof wiped down over the side walls of the container and the cage is designed to receive the liners and hold them in a neat stack from where they may be delivered one by one onto the containers.

Each of the liner cages is designed to hold a relatively large supply of liners and a weighted plate is disposed above the liner supply to hold the liners normally compacted and to urge them toward the lower end of the cage so that they ride on the lip **35**. The weighted disk is shown in Figure 8 and it is formed of a pair of metal or other plates **36** and **37** held together by headed pins **38** which are fixed to plate **37** and have free movement through the plate **36**. The plates **36** and **37** are resiliently urged apart by springs **39** which surround the pins **38** and the composite plate is of the desired weight to hold the liner stack normally compressed.

The weight of the plate must be carefully controlled to be just sufficient to hold the pack nicely compacted. If the weight becomes too great, the stack may be too tightly engaged against the lip **35** so that the free removal of the lowermost liner is precluded. Yet while providing a light weight plate to hold the stack compact, a suffi-

ciently solid backing up action must be present to ensure that the tacky bead is driven into proper engagement with the lowermost liner. It has been found that a wetted gelatin bead, in passing from its producing means to the liner applying means, tends to dry out over its surface so that a tough skin begins to form on the bead. The container must drive against the liner so hard as to break the skin so that the tacky gelatin will become exposed, but a plate light enough to merely hold the liners compacted does not have enough inertia in its mass to provide the proper resisting force. In order to produce the necessary backing up action, the upper plate **36** of the weighting means is provided with a plurality of ratchets **40** engaging suitable ratchet teeth **41** on the inner wall of the cage which construction holds the plate **36** immovable when the container is driven upwardly against the lowermost liner in the stack.

The lower plate **37** is resiliently mounted from plate **36** to provide a compensating effect for a reason that is explained below. During the normal operation of the liner applying means, when the cage is substantially full of liners, the small quantity of air trapped between the liners provides a resilient cushion, but as the supply of liners diminishes, the springs come into play. The overall movement of the container into the cage is substantially constant and it is apparent that as the cushioning effect of the air diminishes as the depth of the liner supply decreases, the springs must take up a portion of the motion. Either the cushioning effect or the spring tension is of such degree as to break the skin formation on the bead.

The provision of this cushioning action either by the air between the separate liners in the stack or by the plate structure, automatically compensates for containers of different height. It is readily seen that in the commercial production of fiber containers of size to hold 3 pounds of shortening and upwards, that some variation in length of container body will be noted. It is essential, therefore, that the liner applying means be designed to receive the shortest body usually encountered and thus compensating means are required to make the liner applying means universally operable when variations in the order of up to ¼ of an inch are sometimes present.

The liner applying means, as shown in the drawings, makes use of a cage disposed over each pocket **31** in turret **32** and as the turret and liner supply means rotate together during the liner applying cycle, the liner cage is lowered when the cam follower **50** moves around through cam track **51**. The liner supply cage **34** thus moves downwardly in timed relation to the placement of a container in a pocket **31** to drive the lowermost liner in the cage against the tacky bead produced around the upper end of a filled container moving through the machine and after the liner has been firmly engaged on the tacky bead, the cam track is operative to lift the liner supply off of the container. Upon leaving the liner applying means, the container with a disk applied over it is delivered into a transfer wheel **53** that carries the partially closed container to a liner crimping means.

The liner, when it is initially applied to the container, is disposed in a generally flat plane with the periphery of the liner extending beyond the wall of the container at all points. The extending periphery of the liner is then wiped down over the side walls of the container by suitable

crimping means which are operative to fold the liner down and press it tightly against the walls of the container.

The transfer wheel **53** carries the container with the liner applied thereon to the crimping means **60** having a turret formed of spaced plates **61** with pockets **62** therein. Each of the pockets **62** is disposed under an ironing or crimping head **63** which has a recess in its under side, of a configuration to closely fit the open end of the container, and as soon as the container is delivered into the pocket **62** of the star wheel, the ironing head **63** is lowered by its cam follower **64** and cam track **65** to press the ironing head down over the liner and open end of the container. The container moves relatively into the configured recess in the lower side of the ironing head **63** so that the extending peripheral portions of the liner are bent down around the wall of the container and are held tightly pressed against the wall, whereby the liner is firmly adhered to the wall of the container by the tacky bead produced around the open end thereof. The ironing head is designed to fit the open end of the container in such a manner that the tacky bead is mashed flat and spread quite extensively down the wall of the container and under the turned down peripheral portions of the liner.

The ironing heads are each driven into position and held on the individual containers until the liners become set on the tacky beads disposed around the walls of the containers and then the ironing heads are lifted by the cam track and as the ironing heads begin to lift, the containers become engaged tightly in the pockets **62** through engagement with the inset portion **66**, Figure 1, of the guide wall of the crimping means which is designed to press into the wall of the container adjacent the stiffer part near the bottom of the container. The containers are thus firmly engaged in the turret while the tightly fitting ironing heads are being lifted off of the containers.

The container having the liner applied thereover and crimped down around the walls is then delivered from the crimping means **60** to the cap applying means **70**. The containers move from turret **61** of the crimper to the turret **71** of the capping means and the pockets **72** engage the individual containers passing from the crimper to deliver them under a cap chute **73**. The cap chute is operative to present skirted caps in a manner as best shown in Figures 2 and 10 so that a container with the liner applied thereto will engage the downwardly extending skirt of the lowermost cap in the chute to pull the cap out of the chute and deliver it forwardly under the cap pressing plate **74**.

The caps best adapted to the closing of containers of the type shown herein have relatively deep skirts and care must be taken to avoid placement of the cap on the container in a cocked position, which might preclude proper seating of the cap on the body. To insure the exact assembly of the cap on the body, the skirt of the cap is first placed on the body with only a very limited penetration of the body into the skirt until the entire cap is disposed generally concentrically with respect to the container whereupon the container is then pushed up into the cap to complete the capping operation.

The cap is first delivered into position over the container, and, as shown in Figure 10, the upper plate **71** of the capper turret holds the

cap so that the skirt will not be applied so far over the container such that it might get into a cocked position. As the turret 71 advances, and the cap is withdrawn entirely from the chute, it falls onto the body in concentric relation thereto. The plate 74 aids in accomplishing this assembly and the container then passes up over the cam plate 75, best shown in Figure 10, to lift the container into the cap to effect the complete placement of a cap on the container. The capped container is then passed from the machine through the outlet conveyor 80.

The above described machine forms the preferred embodiment of this invention but in one modification thereof the container, with a liner applied thereto, may be passed directly from the liner applying means to the capping means. It has been found that the cap may be simultaneously applied to a container with the crimping of the liner so that the application of the cap serves as the crimping means to lay the liner tightly against the wall of the container. This method of closing the container may be utilized where it is desired that the seal between the liner and the tacky bead shall remain undisturbed after initially bending the liner down around the wall of the container.

The above described machine functions to produce a tacky bead around the mouth of a container by either the wetting of a previously applied gelatin bead or by applying a fresh molten gelatin solution to the container as it moves into the capping machine. The container having the tacky bead produced around its open end is then delivered into the rotating turret 32 of the liner applying means wherein the tacky bead is driven into engagement with the lowermost label held in the liner supply means 34. The container is then withdrawn from the liner supply cage and is delivered through the transfer wheel 53 to the liner crimping station 60. The ironing head 63 is then reciprocated downwardly onto the container to iron the liner down over the container walls where it is fixed by the tacky bead and the crimping means is lifted from the container while the container is positively held down by engagement between the wall 66 and the turret pocket 62. The liner having been crimped around the container, the container is then passed to the capping means 70 where a skirted cap is withdrawn from the capping chute 73 and applied to the container by a two stage method. The cap is first concentrically arranged around and over the container and then the cap is driven home.

Suitable drive means are provided for powering the inlet star wheel 30, the turret 32 of the disk applying station, the transfer wheel 53, the turret 61 of the cap crimping means, and the turret 71 of the capping means. These various working stations have intergeared drive connections and are driven to deliver the containers to be closed through the machine with a continuous motion and the containers are passed smoothly from the pockets of one turret to the pockets of another by means of the cooperating guide walls in a conventional manner.

Any suitable means may be provided for rotating the containers against the moistener shown in Figure 11 or against the gelatin applicator shown in Figure 3. Also in the claims, when the word "fabric" is used to describe the window covering of the gelatin applicator, the word is intended to include wire screen material of fine mesh, perforated flexible sheets, and any other material having a characteristic porosity such

that molten gelatin solution will ooze therethrough. Depending more or less upon the flexibility of the fabric, a bead of greater or less width can be applied, although the viscosity of the solution also must be considered.

It is further suggested that adhesives other than gelatin containing may be used. A casein type adhesive of proper consistency may be utilized and, of course, inedible glues, although an edible form is preferred. As above stated, the adhesive is preferably of a nature such as will repel grease, may be rendered temporarily tacky, and set to a firm degree at atmospheric temperatures.

While the above constitutes the preferred embodiment of this invention, it is apparent that many modifications will occur to those skilled in the art. All such modifications are contemplated to fall within the scope of the following claims.

We claim:

1. A machine for closing a container with a liner adapted to seal the open end of the container and then placing a cover over the liner and end of the container; comprising means to produce a tacky bead around the perimeter of said open end of the container; means to hold a stack of liners with the end liner of the stack exposed; said liners each being of a size to cover the open end of a container and extend partially down the side walls of such container; means to move the holding means and the container relatively to drive the tacky bead into contact with said exposed liner and then retract so that said exposed liner, which adheres to the tacky bead around the open end of the container, is withdrawn from the holding means; and means operative to thereafter apply a cover and wipe the liner against the side walls of the container to complete the closing of the container.

2. A machine for closing a container with a liner adapted to seal the open end of the container and then placing a cover over the liner and end of the container; comprising means to apply a tacky gelatin bead around the perimeter of said open end of the container; means to hold a stack of liners with the end liner of the stack exposed; said liners each being of a size to cover the open end of a container and extend partially down the side walls of such container; means to move the holding means and the container relatively to drive the tacky bead into contact with said exposed liner and then retract so that said exposed liner, which adheres to the tacky bead around the open end of the container, is withdrawn from the holding means; and means operative to thereafter apply a cover and wipe the liner against the side walls of the container to complete the closing of the container.

3. A machine for closing a container with a liner adapted to seal the open end of the container and then placing a cover over the liner and end of the container; comprising means including a reservoir for a molten gelatin solution; said reservoir having a fabric window disposed in the wall thereof through which said molten gelatin solution will ooze to the outer surface of the fabric window; means to move said open end of the container into contact with said fabric window with said open end of the container in contact with the solution which has oozed through the window to produce a tacky bead around said open end; means to hold a stack of liners with the end liner of the stack exposed; said liners each being of a size to cover

the open end of a container and extend partially down the side walls of such container; means to move the holding means and the container relatively to drive the tacky bead into contact with said exposed liner and then retract so that said exposed liner, which adheres to the tacky bead around the open end of the container, is withdrawn from the holding means; and means operative to thereafter apply a cover and wipe the liner against the side walls of the container to complete the closing of the container.

4. A machine for closing a substantially cylindrical container with a liner adapted to seal the open end of the container and then placing a cover over the liner and end of the container; comprising means including a reservoir for a molten gelatin solution; said reservoir having a fabric window disposed in the wall thereof through which said molten gelatin solution will ooze to the outer surface of the fabric window; means to roll said cylindrical container against said fabric window with said open end of the container in contact with the solution which has oozed through the window to produce a tacky bead around said open end; means to hold a stack of liners with the end liner of the stack exposed; said liners each being of a size to cover the open end of a container and extend partially down the side walls of such container; means to move the holding means and the container relatively to drive the tacky bead into contact with said exposed liner and then retract so that said exposed liner, which adheres to the tacky bead around the open end of the container, is withdrawn from the holding means; and means operative to thereafter apply a cover and wipe the liner against the side walls of the container to complete the closing of the container.

5. A machine for closing a substantially cylindrical container with a liner adapted to seal the open end of the container and then placing a cover over the liner and end of the container; comprising means including a heated reservoir for a molten gelatin solution; a heated melting pot to render said gelatin solution molten; means to convey the melted solution from said pot to said reservoir; said reservoir having a fabric window in a wall thereof through which said molten solution will ooze to the outer surface of the fabric window; means to collect the excess molten solution oozing through said window and flowing down the outside thereof; means to convey said overflowing molten solution to said melting pot whereby the gelatin solution is continuously recirculated to maintain it in the molten state; means to roll a cylindrical container against the outer wall of said window with said open end of the container in contact with the oozing gelatin solution to produce a tacky bead around said open end; means to hold a stack of liners with the end liner of the stack exposed; said liners each being of a size to cover the open end of a container and extend partially down the side walls of such container; means to move the holding means and the container relatively to drive the tack bead into contact with said exposed liner and then retract so that said exposed liner, which adheres to the tacky bead around the open end of the container, is withdrawn from the holding means; and means operative to thereafter apply a cover and wipe the liner against the side walls of the container to complete the closing of the container.

6. A machine for closing a container having a gelatin bead applied around an open end thereof, said machine including means for applying a liner adapted to seal the open end of the container and placing a cover over the liner and end of the container; comprising means including a moistened pad disposed to cooperate with said open end of the container; means to move said container and moistened pad into contact whereby the gelatin bead is wetted to render it tacky; means to hold a stack of liners with the end liner of the stack exposed; said liners each being of a size to cover the open end of a container and extend partially down the side walls of such container; means to move the holding means and the container relatively to drive the tacky bead into contact with said exposed liner and then retract so that said exposed liner, which adheres to the tacky bead around the open end of the container, is withdrawn from the holding means; and means operative to thereafter apply a cover and wipe the liner against the side walls of the container to complete the closing of the container.

7. A machine for closing a substantially cylindrical container having a gelatin bead applied around an open end thereof, said machine including means for applying a liner adapted to seal the open end of the container and placing a cover over the liner and end of the container; comprising a moisture-containing pad disposed to cooperate with said open end of a container; means to roll a container against said pad to wet the dried gelatin bead to render said bead tacky; means to hold a stack of liners with the end liner of the stack exposed; said liners each being of a size to cover the open end of a container and extend partially down the side walls of such container; means to move the holding means and the container relatively to drive the tacky bead into contact with said exposed liner and then retract so that said exposed liner, which adheres to the tacky bead around the open end of the container, is withdrawn from the holding means; and means operative to thereafter apply a cover and wipe the liner against the side walls of the container to complete the closing of the container.

8. The combination with a machine for closing a container with a liner adapted to seal the open end of the container and then placing a cover over the liner and end of the container, wherein said liner is positioned on the open end of the container by engagement with a tacky bead produced around the perimeter of an open end of the container; comprising walled means to hold the stack of flexible liners in position for engagment with the tacky bead disposed around the open end of the container; said holding means for said stack of liners having an open end through which the flexible liners are removed; and said stack of liners normally being retained in said holding means by a lip extending from the wall of the holding means into said open end of the holding means and being disposed to engage the periphery of the exposed liner to retain the stack in said holding means; said lip being dimensioned to pass over the open end of the container whereby the tacky bead may be driven into contact with the exposed liner; and the engagement between the exposed liner and said lip being such that the liner adhering to the tacky bead may be withdrawn when the holding means and the container are moved apart relatively.

9. A device for holding a supply of flexible

liners in position for application to a container having a tacky bead produced around the open end thereof; comprising walled means to hold the stack of flexible liners in position for engagement with the tacky bead disposed around the open end of the container; said holding means for said stack of liners having an open end through which the flexible liners are removed; and said stack of liners normally being retained in said holding means by a lip extending from the wall of the holding means into said open end of the holding means and being disposed to engage the periphery of the exposed liner to retain the stack in said holding means; said lip being dimensioned to pass over the open end of the container whereby the tacky bead may be driven into contact with the exposed liner; a lightweight plate disposed over said stack to hold said stack against said lip; said plate cooperating with the walled means to provide a rigid backing so that when the container is driven against the lowermost liner in the stack, that firm contact is established between the liner and tacky bead; and the engagement between the exposed liner and said lip being such that the liner adhering to the tacky bead may be withdrawn when the holding means and the container are moved apart relatively.

10. A device for holding a supply of flexible liners in position for aplication to a container having a tacky bead produced around the open end thereof; comprising walled means to hold the stack of flexible liners in position for engagement with the tacky bead disposed around the open end of the container; said holding means for said stack of liners having an open end through which the flexible liners are removed; and said stack of liners normally being retained in said holding means by a lip extending from the wall of the holding means into said open end of the holding means and being disposed to engage the periphery of the exposed liner to retain the stack in said holding means; said lip being dimensioned to pass over the open end of the container whereby the tacky bead may be driven into contact with the exposed liner; a light weight means positioned within the walled means and disposed to ride on the top of a stack of liners in said walled means to hold said stack against said lip; said light weight means taking the form of movably connected spaced plates having means to resiliently urge them apart; the top plate of said pair cooperating with the walled means such that it can normally move only in a downward direction as the liner supply is used up; and the engagement between the exposed liner and said lip being such that the liner adhering to the tacky bead may be withdrawn when the holding means and the container are moved apart relatively.

11. A machine for deforming a liner and adhering the liner to a tacky bead produced around the open end of the container comprising means to deform a liner applied over the open end of the container, said deforming means taking the form of a close-fitting ironing member to wipe the edges of the liner around the wall of the container, the fit of the ironing member being so tight as to spread the tacky bead throughout a wide area between the wall of the container and the liner when driven home over the liner, means to drive the ironing member onto the container, and means to tightly engage the container as the ironing member is being withdrawn from engagement with the container.

12. A continuously operable means for deforming a liner and adhering the liner to a tacky bead produced around the open end of the container comprising a plurality of means to deform a liner applied over the open end of containers, said deforming means being mounted for rotary movement, a turret rotating with said deforming means having pockets to receive a container with a liner applied over the open end thereof, each of said deforming means taking the form of a close-fitting ironing member to wipe the edges of the liner around the wall of the container, the fit of the ironing member being so tight as to spread the tacky bead throughout a wide area between the wall of the container and the liner when driven home over the liner, means to drive the deforming means onto the containers disposed in the pockets of the turret as the turret and deforming means rotate together, and means to hold each of the containers tightly in the pockets of the turret while the deforming means is being withdrawn from engagement with the container.

13. A capping and crimping means for placing a deformable liner and cover on a container comprising means to deliver a cap into concentric relation with respect to the container having a deformable liner thereon and over which the cover is to be applied, means to thereafter drive said container and cover relatively together whereby the cover will deform the periphery of the applied liner down around the walls of the container and simultaneously spread said tacky bead throughout a relatively wide area between the wall of the container and the liner, and said cap being adapted after being driven home on the container to hold said liner immovable while the tacky adhesive bead is setting.

14. A capping means for placing a relatively wide-skirted and preformed cap on a container, said skirt being adapted to closely fit the container wall comprising a chute means to deliver the cap into a position over the moving container with the skirt concentrically arranged immediately over the open end of the container, the movement of the container serving to withdraw a cap from the chute, and cam means to thereafter move said cap and container relatively together longitudinally as the container continues on its path whereby the cap is driven home on the container with the skirt disposed in parallel relationship with respect to the wall of the container.

15. A method of closing a container by placing a liner over the open end and applying a cap thereto comprising the steps of producing a tacky bead around the periphery of an open end of the container, contacting the open end having the tacky bead produced thereon with a liner to cause the liner to adhere to the open end of the container, and thereafter applying a cap and wiping the liner against the wall of the container.

16. The method of closing a container by placing a liner over the open end thereof and applying a cap over the liner; comprising the steps of applying a molten gelatin-containing solution around the periphery of an open end of the container, contacting the open end of the container with a liner while said bead of gelatin-containing solution is in a molten state to cause the liner to adhere to the open end of the container, and thereafter applying a cap and wiping the liner against the wall of the container.

17. A method of closing a container by placing a deformable liner over the open end and ap-

plying a cap thereto comprising the steps of producing a tacky bead around the periphery of an open end of the container, contacting the open end having the bead produced thereon with a liner to cause the liner to adhere to the open end of the container, and thereafter applying a cap to deform and wipe the liner against the wall of the container.

18. A package for a plastic fat-containing product which package is formed of a generally cylindrical relatively stiff paper-like fat-absorbing material, comprising a body formed of said material and adapted to receive the product; a skirted cap adapted to close the open end of the package; said body being provided with a greaseproof lining on its inner side; a bead of normally hard greaseproof material surrounding the edge and extending partially down the outside wall of the open end of said container through which it is filled; said bead material being capable of being rendered tacky; a flexible, thin, paper-like, and greaseproof liner for closing the open end of said container; said liner being affixed to said container by rendering said bead tacky and thereafter permitting it to harden whereby said greaseproof liner becomes adhered to the surrounding edge of said open end of the container to seal the contents within the body; and said cap being adapted to be placed over the adhered liner to protect the liner and hold it tight on the container.

19. A method of closing a container by placing a liner over the open end and applying a cap thereto comprising the steps of producing a tacky bead around the periphery of an open end of the container, contacting the open end having the tacky bead produced thereon with a liner to cause the liner to adhere to the open end of the container, and thereafter applying a cap and wiping the liner against the wall of the container by driving the container and cap together relatively.

20. A method of closing a container by placing a liner over the open end and applying a cap thereto comprising the steps of producing a tacky bead around the periphery of an open end of the container, contacting the open end having the tacky bead produced thereon with the bottom liner in a liner supply to cause the bottom liner to adhere to the open end of the container, and moving the container away from the liner supply to withdraw the bottom liner therefrom, and thereafter applying a cap and wiping the liner against the wall of the container.

21. A method of closing a container by placing a liner over the open end and applying a cap thereto comprising the steps of moistening a gelatin bead disposed around the periphery of an open end of the container to render the bead tacky, contacting the open end having the tacky bead produced thereon with a liner to cause the liner to adhere to the open end of the container, and thereafter applying a cap and wiping the liner against the wall of the container.

22. A method of closing a container by placing a liner over the open end and applying a cap thereto comprising the steps of applying a tacky adhesive bead around the periphery of an open end of the container, contacting the open end having the tacky bead produced thereon with a liner to cause the liner to adhere to the open end of the container, thereafter applying a cap and wiping the liner against the wall of the container, and causing the adhesive bead to set up whereby to hold the liner permanently affixed to the container.

ERIC W. LAGER.
JAMES J. PROHASKA.
HEINRICH E. HAASE.

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