

Sept. 25, 1928.

H. I. BEADLE

1,685,393

METHOD OF COVERING ARTICLES AND THE PRODUCT RESULTING THEREFROM

Filed Oct. 25, 1927

2 Sheets-Sheet 1

Fig. 1

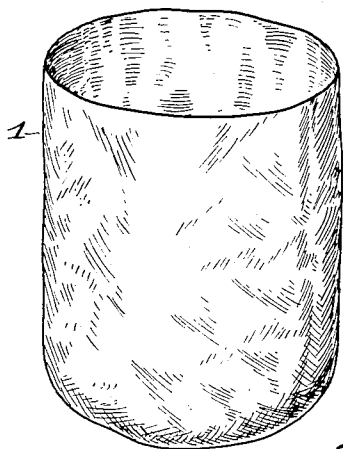


Fig. 2.

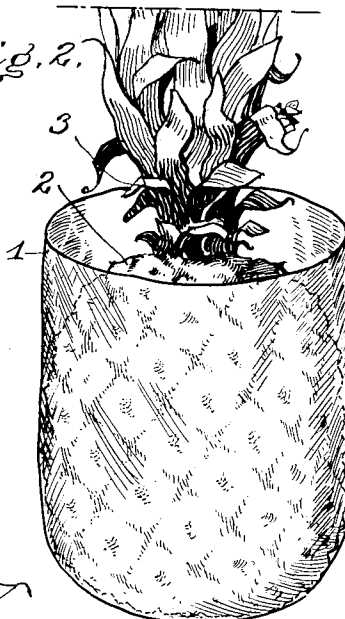


Fig. 5.

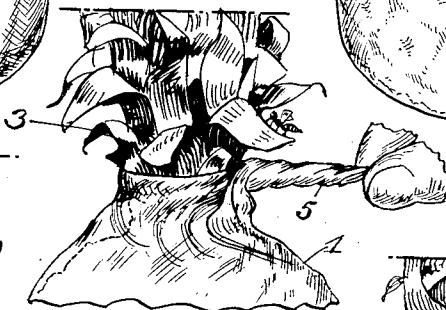


Fig. 3.



Fig. 4.

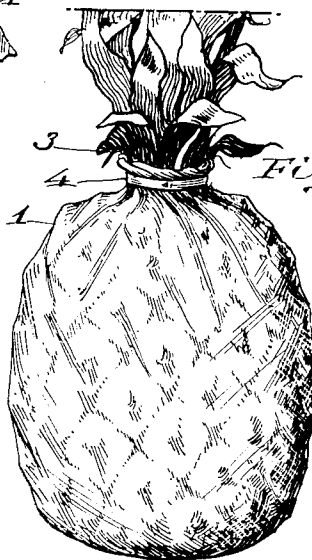
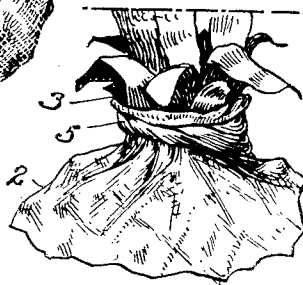


Fig. 6.



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Fig. 7.

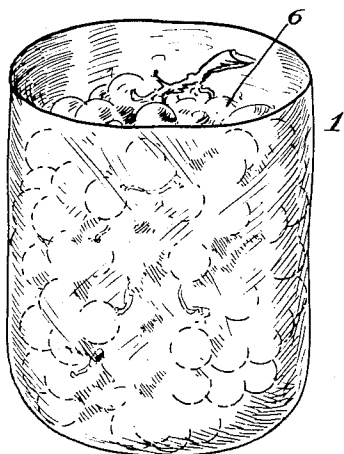
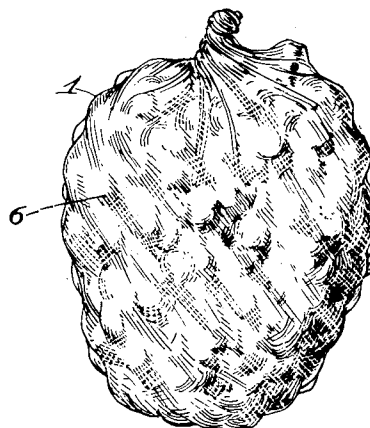


Fig. 8.



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METHOD OF COVERING ARTICLES AND THE PRODUCT RESULTING THEREFROM

Application filed October 25, 1927. Serial No. 228,547.

This invention relates to the protection and preservation of articles, more particularly perishable edible articles, such for instance as fruits, vegetables, eggs, etc., and the invention contemplates the enclosure of the article in a preformed bag-like container of hydrated cellulose in moist condition, which on drying will contract tightly on the article and will conform to the shape and surface configuration thereof, thereby forming a tightly fitting transparent covering through which the article may be readily seen, and its character determined.

The invention therefore consists in the improved method of protecting articles by their enclosure in a protective covering or container; and the covered article produced thereby; and in the specification to follow the invention will be described in detail, and the novel parts thereof will be pointed out in the appended claims.

In the accompanying drawings:

Fig. 1 is a perspective view of the container or covering of hydrated cellulose as it appears before application to the article to be covered;

Fig. 2 is a side elevation showing the article, in this instance a pineapple, seated in the container, which latter is shown in unshrunk condition;

Fig. 3 is a similar view showing the container as it appears after shrinking and contracting on the article;

Fig. 4 is a view similar to Fig. 3 showing a retaining clip applied to the gathered-in end of the retainer;

Fig. 5 is a perspective view showing a different method of contracting or closing the upper end of the container on the article, the figure illustrating the initial step of the action;

Fig. 6 is a view similar to Fig. 5 showing the container of Fig. 5 in its completed contracted form;

Fig. 7 is a view similar to Fig. 2 showing in this instance a bunch of grapes seated in the unshrunk preformed container; and

Fig. 8 is a similar view showing the container after it has dried and shrunk on the grapes.

Referring to the drawings:

In carrying my improved method into effect, I provide a bag-like receptacle container 1 such as shown in Fig. 1, of hydrated cellulose which may be formed into shape in any

suitable or appropriate manner, as for instance by dipping a suitable forming body, such as a test tube or the like, into a bath of liquid hydrated cellulose, treating the coating while on the forming body to coagulate it, stripping the coagulated coating from the forming body which will now be in the form of a bag-like container, and finally treating the container to purify the material thereof and render it transparent. The article to be covered, a pineapple 2 in the example of the invention shown in Figs. 1, 2 and 3, is as shown in Fig. 2, placed in the container while the latter is in moist condition, the diameter of the container being sufficient to permit it to be easily passed over the article, and being of such depth that its upper end will terminate at about the base of the leaf crown 3 of the pineapple. The upper end of the container is now displaced laterally and gathered in around the base of the crown 3, which action may be performed by hand or by suitable mechanical means so as to cause said end of the container to form into a plurality of thicknesses or folds which will coalesce and homogeneously unite with each other and will embrace fairly closely the base of said crown; and in this condition the container is allowed to dry. On drying, the container, owing to the well known characteristics of hydrated cellulose, will shrink and contract with considerable force throughout its entire extent and the coalesced folds will harden, with the result that the container will conform closely and neatly to the contour of the pineapple and to the surface configuration of the same, and the upper gathered end of the container will surround the base of the crown 3 closely in the form of a reinforced stiff bead or rim formed by the hardened united folds, thereby forming a closely fitting transparent protective covering completely enveloping the entire exposed surface of the edible portion of the pineapple. This protective covering, although interrupted at the point where the leaf crown protrudes, nevertheless fits closely and embraces the whole edible portion of the pineapple, and it has been found under these conditions that it will act to preserve the fruit in edible condition for a period of time greatly in excess of that during which the fruit will retain its edible properties without such covering. This preservative action is due to the fact that contact of the air with the edible portion of the pineapple and the consequent

dehydration is prevented, and also to the fact that the fruit is protected from other external influences tending to set up decay or deterioration.

5 The upper end of the container where it is contracted or gathered in to embrace the protruding crown of the pineapple, may be more effectually retained in position by means of a retaining device 4 as illustrated in Fig. 4, 10 shown in the present instance in the form of a metal clip surrounding the gathered-in end of the container and having its ends fastened together, so that it may be readily detached when the fruit is to be used. Due to the 15 moist condition of the container when placed upon the fruit, the folds or pleats formed by the gathering in action, will coalesce or adhere to each other, and at the same time will shrink around the crown of the pineapple 20 and in this way a very firm substantial and contracted neck portion will be formed on the upper end of the container where it surrounds the said crown of the fruit. This will give the completed article a neat and finished appearance, and while affording an effective protection against deterioration, it 25 will not affect unfavorably the appearance of the fruit as a salable product.

Instead of gathering the container in at 30 its upper end to fit around the crown, as shown in Fig. 3, the method shown in Figs. 5 and 6 may be resorted to to contract the open end of the container. As shown in Fig. 5 the upper end of the container is grasped by the 35 fingers and drawn forcibly aside and then twisted, thereby causing the untwisted edge of the container to surround and embrace the projecting portion of the fruit very tightly and forming a twisted tail portion 5 which 40 as shown in Fig. 6 is wound around the contracted end of the container so as to complete the closure. This tail portion wound around the contracted end of the container, will, when the container is dried in the final stage of the 45 process, homogeneously unite with the material about which it is wound and will harden and set and form a stiff reinforced portion at this point consisting of a plurality of folds of the material of the container.

50 In Figs. 7 and 8 I have shown the improved protective covering applied to a bunch of grapes 6. In this case, as in the method of application before described, the container is preformed, and in moist condition is slipped 55 over the bunch of grapes; and the size of the container is such as to leave a substantial length of the same projecting above the upper end of the bunch so that the walls of the projecting end may be brought together in a plurality of thicknesses or folds as shown, and 60 twisted so as to completely close the end of the container, which on drying will contract and shrink in the manner before described and thereby conform to the contour of the 65 bunch of grapes and to the surface configura-

tion thereof, while the folds of the twisted end will by homogeneously uniting with each other, and finally setting, form an effectual reinforced closure for the container. In this case the article is completely enclosed in 70 a homogeneous covering of hydrated cellulose, there being no stalk, stem, or other projecting portion interrupting the continuity of the closure.

As in the case first described, a retaining 75 device in the form of a clip may, if desired, be applied around the twisted end of the retainer to better secure the same.

Instead of completely enclosing the bunch of grapes as just described, the same method 80 of procedure shown in Figs. 5 and 6 may be adopted so as to cause the upper end of the container to tightly surround the projecting stem of the bunch of grapes.

In a similar manner other articles, and 85 other kinds of fruits and vegetables may be protected from deterioration and decay by enclosing them in a protective preformed covering of hydrated cellulose in moist condition, and bringing together the walls of the open 90 end of the covering, either to closely embrace any projecting portion the article may possess, or to homogeneously close the open end of the covering where the article does not 95 possess a stem or other projecting portion.

In the foregoing description and accompanying drawings I have set forth the invention in the particular detailed form and embodiment which I prefer to adopt, but it 100 will be understood that the invention is not limited to such details, either in respect to the method of procedure or the form and characteristics of the covering body, except in so far as such limitations are specified in the claims.

What is claimed is:

105 1. The method of preserving perishable articles such as fruits, vegetables and the like, from deterioration or decay, which consists in providing a container of hydrated transparent cellulose in moist condition and open 110 at its end, placing the article to be preserved in said container, forcing the walls of the open end of the container laterally on the article to closely surround the same, and drying the container to cause it to contract 115 tightly on the article and thereby form a transparent preservative covering.

2. The method of preserving perishable 120 articles such as fruits, vegetables and the like from deterioration or decay, which consists in providing a container of hydrated transparent cellulose in moist condition and open at its end, placing the article to be preserved in said container, forcibly twisting the walls 125 of the open end of the container to cause said walls to closely embrace the article, and drying the container to cause it to contract tightly on the article and thereby form a transparent preservative covering.

3. The method of preserving from de- 130

terioration or decay, perishable edible articles having a projecting inedible portion, which consists in providing a container of hydrated transparent cellulose in moist condition and open at its end, placing the article in said container with its projecting portion protruding from the open end thereof, displacing the walls of the open end of the container laterally on the edible portion of the article and around the protruding portion to cause it to closely embrace the same, and drying the container to cause it to contract tightly on the article and thereby form a transparent preservative covering.

4. The method of preserving from deterioration or decay, pineapples having a crown of leaves projecting therefrom, which consists in providing a bag-like container of transparent cellulose in moist condition, placing the pineapple in the container with its crown of leaves projecting from the open end thereof, displacing the open end of the container laterally on the edible portion of the pineapple and around the crown of leaves so as to closely embrace the same, and drying the container to cause it to contract tightly around the edible portion of the pineapple and thereby form a transparent preservative covering for the same.

5. The method of preserving from deterioration or decay, edible articles having a projecting inedible portion, which consists in providing a container of hydrated transparent cellulose in moist condition and open at one end, placing the article in said container with its projecting portion protruding through said open end, twisting the walls of the open end of the container at one side of the projecting portion so as to contract the walls around said projecting portion, winding the twisted portion of the wall around the contracted portion, and finally drying the container to cause it to contract tightly on the article and thereby form a transparent preservative covering.

6. The method of preserving perishable articles such as fruits, vegetables and the like from deterioration or decay, which consists in placing the article to be preserved in a container of hydrated transparent cellulose in moist condition and open at one end, contracting the open end of the container on the article in a plurality of thicknesses to reinforce the same at this point, and drying the container to cause it to contract tightly on the article, and the reinforced portion to harden.

7. The method of preserving perishable articles such as fruits, vegetables and the like from deterioration or decay, which consists in placing the article to be preserved in a container of hydrated transparent cellulose in moist condition open at one end, contracting

the open end of the container on the article and thereby forming folds in the material closely contacting with each other, and drying the container to cause it to contract tightly on the article and the folds to unite and harden in the form of a reinforced bead or rim.

8. The method of preserving perishable articles such as fruits, vegetables and the like from deterioration or decay, which consists in placing the article to be preserved in a container of hydrated transparent cellulose in moist condition and open at one end, drawing the open end of the container to one side and twisting the same to cause the untwisted edge of the container to surround and embrace a projecting portion of the article, thereby forming a twisted tail portion of the material, winding the twisted tail portion around the contracted end of the container so as to form a plurality of folds and reinforce said end, and finally drying the container to cause it to contract tightly on the article and the reinforced portion to harden.

9. An article of manufacture, consisting of a perishable article, such as a fruit or vegetable, and a bag-like preservative container of transparent cellulose surrounding and inherently exerting compressive tension on said article, the walls of the open end of the container being displaced laterally on and closely embracing said article.

10. An article of manufacture, consisting of an edible article, having a projecting inedible portion, and a bag-like preservative container of transparent cellulose embracing and inherently exerting compressive tension on the edible portion of the article, with the walls of the open end of the container closely surrounding the inedible portion thereof.

11. A new article of manufacture, consisting of a perishable article, such as a fruit or vegetable, and a bag-like container of transparent cellulose surrounding and inherently exerting compressive tension on said article, the walls of the open end of the container being contracted on the article in a plurality of thicknesses of the material united to each other and forming a hardened reinforced portion.

12. A new article of manufacture, consisting of a perishable article, such as a fruit or vegetable, and a bag-like container of transparent cellulose surrounding and inherently exerting compressive tension on said article, the walls of the open end of the container being contracted on the article in a plurality of folds united to each other and forming a hardened reinforcing rim or bead at this point.

In testimony whereof, I have affixed my signature hereto.

HAROLD I. BEADLE.