

[54] **FOOD STORAGE AND COOKING BAG AND ASSOCIATED HOLDER AND DISPENSING ELEMENT**

[76] Inventor: **John K. Scales**, 1608 33rd St., N.W., Washington, D.C. 20007

[22] Filed: **Aug. 11, 1971**

[21] Appl. No.: **170,791**

[52] U.S. Cl. **222/95, 222/181, 222/541, 248/95**

[51] Int. Cl. **B65d 35/28**

[58] Field of Search 222/190, 95, 541, 493, 222/181, 65; 150/3; 99/77.1, 171 H; 248/95

[56] **References Cited**

UNITED STATES PATENTS

1,530,848	3/1925	Moore	211/94.5
1,693,974	12/1928	Bienstock	248/95
2,037,989	4/1936	Macklanburg	222/95
2,273,128	2/1942	Medsen	150/3
2,815,150	12/1957	Hetzig	222/541
2,918,373	12/1959	Weston	99/77.1
3,184,121	5/1965	Volckening	222/541

Primary Examiner—Robert B. Reeves

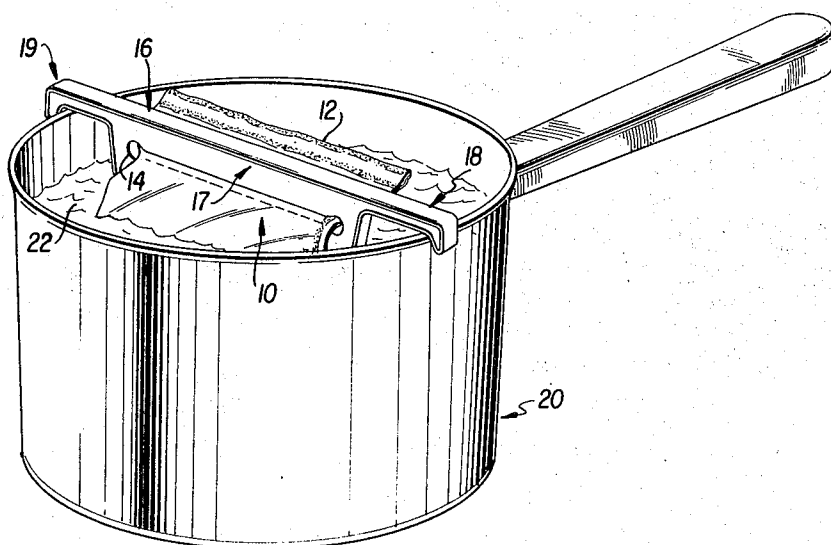
Assistant Examiner—H. Grant Skaggs, Jr.

Attorney, Agent, or Firm—Staas, Halsey & Gable

[57] **ABSTRACT**

A food storage and cooking bag of conventional lay-flat tubular construction is heat sealed at one end to form a handle, V-shaped notches being formed immediately adjacent the handle along the opposite longitudinal edges of the bag. A tearable seal is formed at the opposite end of the bag to permit vacuum sealing of the contents of the bag and subsequent tearing open of that end of the bag for ease of removal of the contents. A bag holding and dispensing element includes a central portion having an elongated slot through which the upper, or handle, end of the bag is inserted for assembling the bag with the element, and a pair of arms formed integrally with the central portion and extending outwardly therefrom. The arms engage the upper edges of the side walls of a cooking vessel containing boiling water into which the food containing portion of the bag is immersed, the element maintaining the handle portion of the bag accessible for ease of removal thereof from the vessel when cooking is completed. Thereafter, the tearable seal is removed to open the end of the bag, the bag then being grasped by the handle and withdrawn through the slot of the element or, equivalently, the element being slid toward the open end of the bag, to extrude, or dispense, the contents of the bag for serving.

4 Claims, 10 Drawing Figures



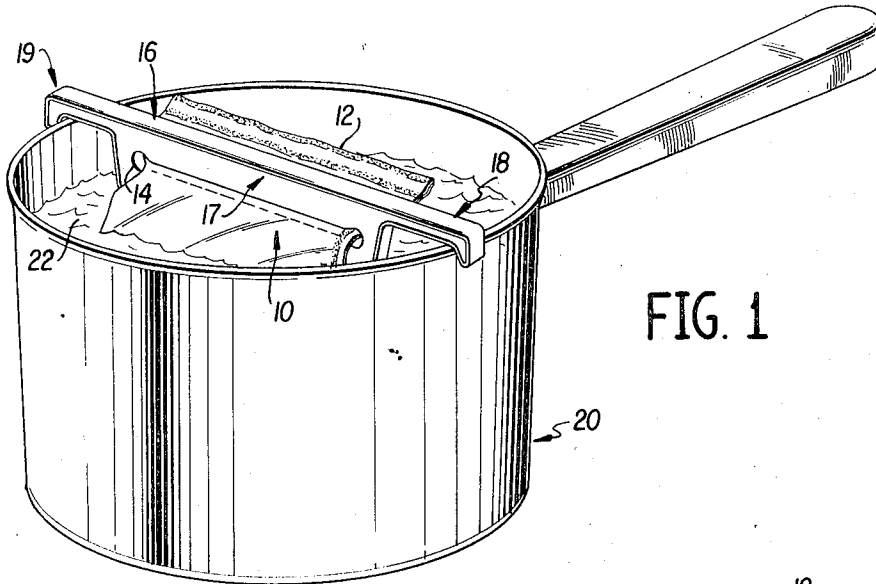


FIG. 1

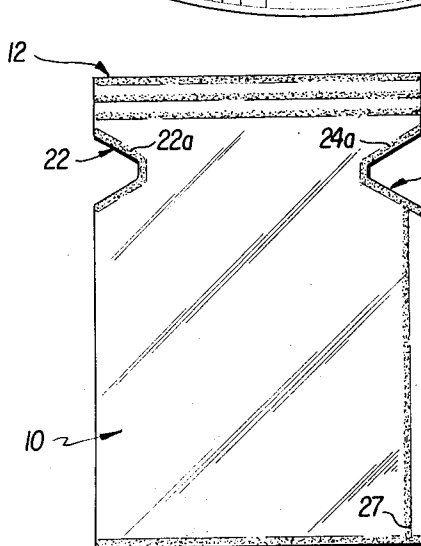


FIG. 2B

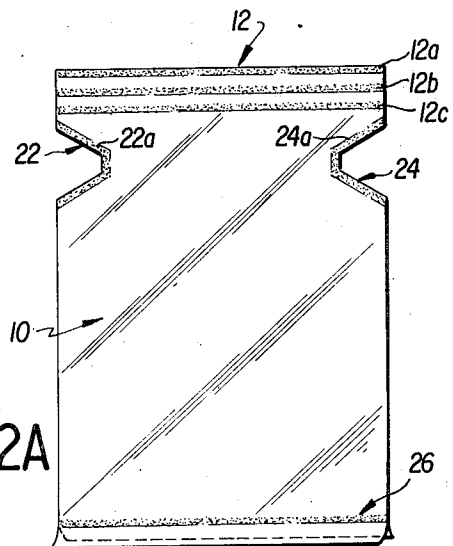


FIG. 2A

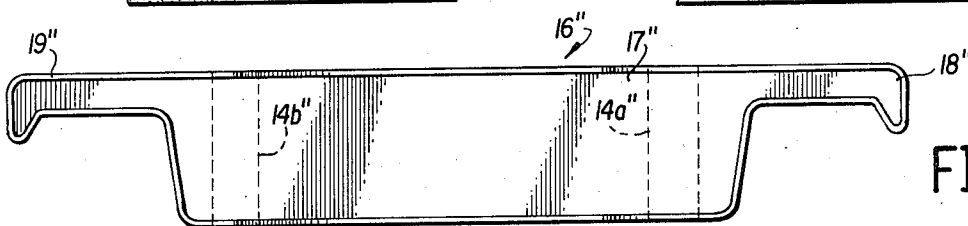


FIG. 8

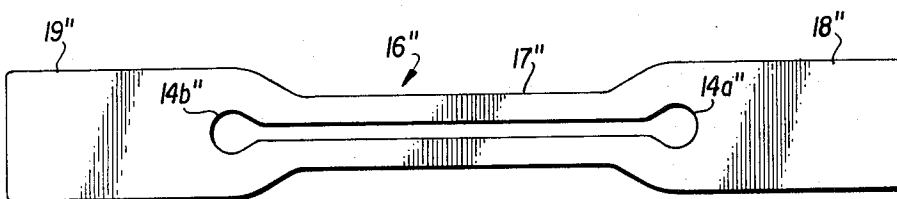
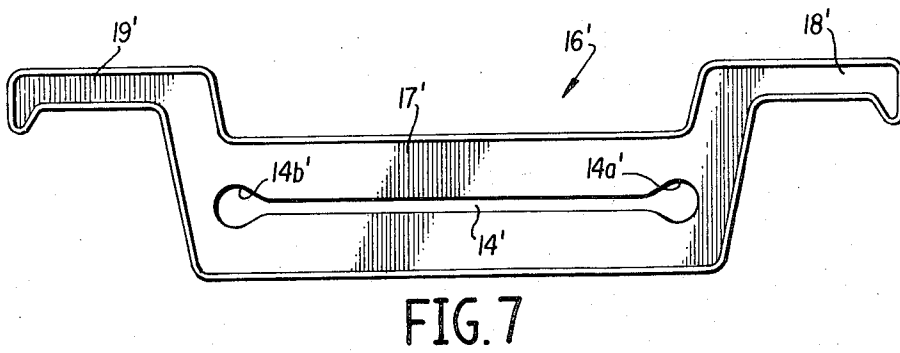
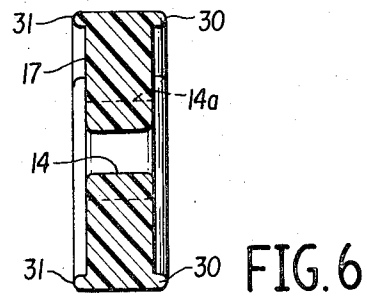
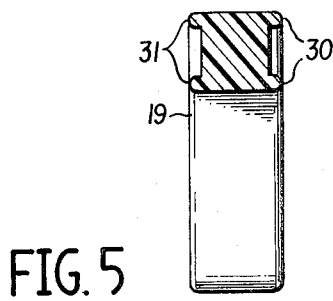
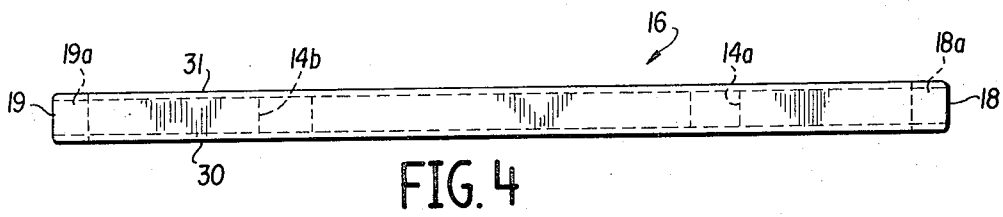
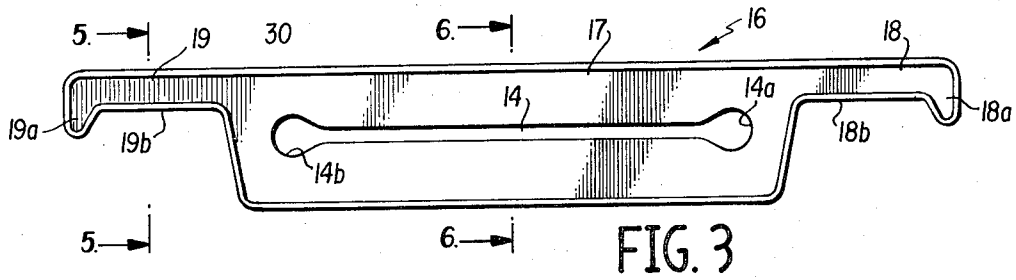


FIG. 9

INVENTOR
JOHN K. SCALES

BY

*Irons, Sears, Staas,
Halsey & Santorelli*
ATTORNEYS



FOOD STORAGE AND COOKING BAG AND ASSOCIATED HOLDER AND DISPENSING ELEMENT

BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention relates to food storage and cooking bags and, more particularly, to a specific configuration of such a bag and a holding and dispensing element for use therewith.

2. State of the Prior Art

The use of plastic bags or envelope-type packages for packaging and storing any of various foods and subsequent cooking or heating of those foods by suspending the bag in boiling water is commonplace today. U.S. Pat. No. 3,151,989 — Sacks et al. — teaches a plastic film suitable for use in making such food storage bags.

In practice, the bags may be extruded in tubular configuration, cut to length, and sealed at one end. After being filled with the desired contents, the bags typically are evacuated and sealed at the remaining, open end. Usually the food contents are frozen during storage.

In use, the bag and at least the food containing portion thereof is immersed in boiling water to cook the food or to heat it to a desired temperature in the case of precooked food. Upon completion of cooking, the bag, with the cooked contents intact, is removed from the boiling water, the bag then being torn open and the contents removed.

Although offering convenience in many respects, the consumer typically encounters certain undesirable problems in the cooking and serving of foods thus packaged. Particularly, in removing the bag from the boiling water, the consumer must in some manner grasp the bag while avoiding subjecting his hands to the boiling water and the steam given off thereby. Usually the bag has become sufficiently submerged by the agitation of the boiling water such that no portion of it is conveniently accessible. Thus the consumer must use a separate utensil for this purpose. Further difficulties then are encountered in grasping the bag while tearing it open for removing the contents. A major problem is then encountered in removing the entirety of the contents since frequently the contents tend to adhere to the sides of the bag. The consumer must then resort to vigorous shaking of the bag or inserting a further utensil into the interior of the bag for complete removal of the contents.

While the foregoing problems are not unduly burdensome, they unquestionably detract from the intended convenience in the use of the packaged food products. Of perhaps greater importance than the full realization of the convenience afforded by the packaged food products is the danger attendant the use thereof to the consumer first in removing the package from the boiling water and thereafter in extracting the contents of the food from the interior of the package, due to the high temperatures of the boiling water and steam, and of the food and the package itself. Accordingly, there exists a need for a device to be used with such food packages to enable realization of the full convenience thereof while limiting unnecessary exposure of the consumer to the high temperatures of the water, steam, the food and the package in handling the latter for removal

from the water and extraction of the foodstuffs from the bag.

SUMMARY OF THE INVENTION

In accordance with the invention, these problems attendant the use of packaged food products are overcome by the provision of an element serving as a holder or hanger for suspending the bag to properly immerse the food contents thereof in boiling water for cooking purposes, which furthermore facilitates removal of the bag from the water upon completion of cooking and affords a dispensing or extruding action for removing the food contents from the bag. The element comprises an elongated structure having a central portion and extending arms from the opposite ends of the central portion adapted to be received over the upper edges of the side walls of the cooking utensil containing the boiling water in which the bag is to be immersed. The central portion contains an elongated slot through which an upper end of the bag is inserted, the lower portion of the bag containing the food then being suspended below the element for immersion in the boiling water.

Preferably, the upper end of the bag is sealed along a plurality of lines so as to afford greater structural integrity and so as to define a handle at that upper end. Further, V-shaped notches are formed in the side edges of the bag immediately adjacent the handle, or, if desired, as a portion of the handle, the dimension of the neck portion of the bag thus defined by the notches corresponding to approximately the length of the elongated slot thereby to assure locking of the bag within the element between the notches.

In use, therefore, the handle formed on the bag and the hanger element facilitate immersing the bag in the boiling water. More significantly, the hanger element and the handle of the bag facilitate removal of the bag from the boiling water upon completion of cooking, since the hanger element maintains the handle portion of the bag in an immediately accessible position above the level of the boiling water.

The bag furthermore preferably is formed with a tearable seal at the opposite end thereof which is opened upon removal of the bag from the water. Although in most cases, the majority of the food contents will fall by gravity into a suitable receiver, the hanger element serves a dual function at this stage for dispensing any food remaining in the bag. More specifically, the bag is grasped by the handle and pulled, or withdrawn, through the elongated slot of the element, i.e., equivalently, the element is slid toward the open end of the bag, thus imparting an extruding action for dispensing the contents of the bag.

The bag, as noted, may be formed of a polyamide film of the type described in U.S. Pat. No. 3,151,989 — Sacks et al. The holder and dispensing element may be formed of a similar plastic-type material of heavier gauge and of suitable structural integrity to perform the support and extruding functions and of sufficient temperature stability to withstand the temperatures to which it is exposed in use. In this context, it is noted that the entire utensil in which the boiling water is contained is generally limited in its temperature to that of boiling water, or 100°C., due to the cooling effects of the water on the side walls of the container. Any of various plastic or other materials may be employed for the construction of the hanger.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of a food package and associated holder element in accordance with the invention, disposed in a cooking utensil and illustrating the use thereof in immersing the food-containing portion of a bag in boiling water for cooking of food contents of the bag;

FIG. 2A is a planar view of the flattened bag of the subject type;

FIG. 2B is a planar view of the flattened bag in an alternative embodiment;

FIG. 3 is a planar view of a bag holding and dispensing element in accordance with a first embodiment of the invention;

FIG. 4 is a top view of the element of FIG. 3;

FIGS. 5 and 6 are cross-sectional views taken along the lines 5—5 and 6—6, respectively, in FIG. 3;

FIG. 7 is a planar view of a second embodiment of the holder and dispensing element of the invention; and

FIGS. 8 and 9 are planar and top views, respectively, of a hanger and dispensing element in accordance with a third embodiment of the invention.

DETAILED DESCRIPTION OF THE INVENTION

In the perspective view of FIG. 1 is shown an assembled food storage and cooking bag in association with a holder element in accordance with the invention, as used for suspending an upper portion of the bag and immersing a lower portion thereof containing food within a body of boiling water for cooking purposes. More specifically, the bag generally identified at 10 includes an upper, handle portion 12 inserted through an elongated slot 14 in the holding element 16. The slot 14 is formed in a central portion 17 of the element 16, laterally extending arms 18 and 19 formed integrally therewith being so designed and configured as to be received over and engage the upper edges of the side walls of the container 20. A suitable level of boiling water 22 is provided in the container 20 such that the lower portion of the bag 10 containing the food to be cooked is entirely immersed therein.

In FIG. 2A is shown a preferred embodiment of a bag for use in accordance with the invention. The bag is formed of a suitable material, typically a plastic as before described which is sufficiently impermeable to permit evacuation and preferably is transparent to permit viewing of the contents. Furthermore, the material of the bag must permit retaining of its properties while subjected to low temperature conditions, e.g. 0°F., for storage of the contents in a frozen condition and, as well, to withstand high temperatures such as that of boiling water, i.e., 100°C. or 212°F., during cooking of the food. Such materials, as noted, are known and available in the art.

The bag may be formed in an extrusion process which provides a tubular bag construction having no side seams, as suggested in FIG. 2A, or may be formed of two flat sheets which then must be sealed along the opposite longitudinal edges. In either instance, the material is cut to provide the desired length of a bag 10 for receiving a desired quantity of food or other materials while permitting sealing at the opposite ends thereof and preferably in the configuration as now to be described. More specifically, one end of the bag is defined to provide a handle 12, for example by effecting a plu-

ality of elongated seals 12a, 12b and 12c across the width thereof. The plurality of seals provides a corrugation effect and thus a relatively more rigid structure for defining the handle 12.

V-shaped notches 22 and 24 are formed on the opposite longitudinal edges of the bag 10 adjacent the handle 12, the vertices of the notches preferably being flattened as at 22a and 24a, respectively, for strengthening effect. It will be appreciated that the number of lateral seals defining the handle 12 may be selected as desired and the specific location of the notches 22 and 24 similarly may be modified. For example, additional lateral seals may be afforded in the upper portion of the bag extending between and joining the V-shaped notches. The lower end of the bag then is sealed by a tearable seal 26 in a manner well known in the art.

The alternative embodiment of the bag shown in FIG. 2B illustrates the provision of a longitudinal tear seal at 27. If desired, of course, a longitudinal tear seal may be afforded along both of the longitudinal edges or along one longitudinal edge and along the lower edge as illustrated at 26 in FIG. 2A. The overall purpose, of course, is to permit opening of the bag in a convenient manner which furthermore is compatible with the dispensing of the contents of the bag through that opened portion. The longitudinal tear is desirable in that, while the bag is supported by the holder, a downward force may be more readily applied to the longitudinal tear strip. Where only the longitudinal tear strip is provided, during the extrusion process as later described, in pulling the bag through the slot of the handle, it may be angularly offset to assure complete extrusion of the contents through the longitudinal opening. The combination of the bottom and longitudinal tear strip, of course, assures that dispensing of the entirety of the bag contents may readily be achieved.

The order, or sequence, in which the seals are provided is not critical. Typically, however, the handle portion of the bag and the V-shaped notches are formed prior to filling the bag with the intended contents and the final sealing step is to provide the seal 26, due to its simpler construction and greater ease of forming. As is known in the art, such seals may be made with in-line automatic dielectric heating equipment such as where vinyl material is used in forming the bag. Where polyethylene material is used instead, the seals may be formed by well known temperature/pressure heat sealing techniques.

The holder and extruder element of the invention identified at 16 in FIG. 1 is shown in greater detail in a planar view in FIG. 3. That same element is shown in a top view in FIG. 4 and in cross-sectional views in FIGS. 5 and 6, the latter taken along the lines 5—5 and 6—6 in FIG. 3. Referring to FIGS. 3 through 6 concurrently, the element 16, as noted, includes a central portion 17 and arm-like extensions 18 and 19 formed integrally therewith. Each of the arms 18 and 19 is enlarged at the outer extremity thereof to include a downwardly extending lip as shown at 18a and 19a, respectively. The lower portion of each arm extension, 18b and 19b, respectively, is of a length to accommodate, and thus be received upon the upper edges of the side walls of, cooking utensils having various different dimensions or widths between the side walls thereof.

The elongated slot 14 furthermore includes enlarged end portions 14a and 14b, for a purpose to be described. Preferably, the element 16 is formed with

beads or ribs 30 and 31 about the edges thereof to strengthen the structure, as illustrated in FIGS. 3 and 4 and as thus seen in the cross-sectional views of FIGS. 5 and 6. The rib construction affords use of a thinner material in the main portion of the element 16 with attendant cost savings.

In FIG. 7 is shown an alternative embodiment of the hanger element of the invention of generally similar construction to that of FIG. 3 and in which like elements are identified by corresponding, primed numerals. The element 16' of FIG. 7 thus includes a central portion 17' and arms 18' and 19', the primary difference being that the central portion 17' containing the elongated slot 14' is disposed beneath the level of the arms 18' and 19'. This construction affords lowering the center of gravity of the assembled bag and element beneath the axis of the arms 18' and 19' as received over the upper edges of the cooking utensil, and thus provides some greater stability while, as well, assuring adequate immersion of the bag within a lower level of boiling water within the utensil.

FIGS. 8 and 9 show a planar and top view, respectively, of yet another embodiment of the invention with like elements again identified by corresponding, doubly primed numerals. The element 16'' similarly includes a central portion 17'' and arms 18'' and 19''. The elongated slot 14'' in this embodiment is formed in a vertical orientation as distinct from the horizontal orientation of the corresponding slot in the other embodiments of the element.

Each of the further embodiments such as those of FIGS. 7 through 9 may similarly include a beaded or ribbed portion along the edges for strengthening purposes.

In each of the embodiments, the elongated slot 14 is of the length just slightly greater than the width or dimension of the neck portion of the bag 10 between the inner edges 22a and 24a of the V-shaped notches 22 and 24. Accordingly, the relatively more rigid handle 12 assures that the upper end of the bag is secured to the element 16. The enlarged ends of the slot, such as 14a and 14b, are provided to facilitate withdrawing the bag through the slot in a dispensing operation. Particularly, those enlarged ends 14a and 14b accommodate the material of the bag in the longitudinal marginal portions thereof between the notches and outer longitudinal edges, inasmuch as the full width of the bag exceeds the length of the slot.

In use, the relatively rigid handle 12 in association with the holder element 16 facilitate immersion of the bag into, and removal of the bag from the boiling water, the handle 12 maintaining the bag handle 12 accessible at all times. For removing the contents from the bag, the tearable slot 26 is torn open and, typically, most of the contents of the bag fall by gravity into a suitable receiving dish. To the extent that the contents do not readily fall out or some remain, the element 16 then serves as an extruder for dispensing the contents from the bag. In this operation, the handle 12 is grasped and the element 16 and bag 12 are moved relatively to one another, the bag 10 being drawn through the slot 14 or, equivalently, the element 16 being slid toward the open end of the bag. The slot 14 is of a dimension only slightly in excess of the thickness of the empty bag 10 and thus the element 16 serves to extrude any remaining food from the bag. As noted, the enlarged ends 14a and 14b of the slot 14 serve to accommodate the excess

width of the bag relative to the slot 14 and thereby facilitate the withdrawal of the bag through the slot.

Accordingly, the holding and dispensing element of the invention, particularly when used with a bag of the construction as described, facilitates the placement of the bag in boiling water as well as removal thereof from the boiling water and furthermore serves as an extruder for dispensing food particles from the bag, all in an efficient and effective manner. It is apparent that the element 16 may be adapted for reuse with a number of such bags or, by virtue of its simple construction and low cost, may be preassembled with each bag.

Numerous modifications and adaptations of the holder and dispensing element of the invention and of a bag configuration suitable for use therewith will readily be apparent to those skilled in the art and thus it is intended by the appended claims to cover all such modifications and adaptations as fall within the true spirit and scope of the invention.

What is claimed is:

1. A combination of a holding and dispensing element and a food storage and cooking bag intended to be immersed in a heated liquid within a container for cooking the food contents thereof, comprising:

an elongated element having a central portion and integrally formed arms extending from the opposite ends of that central portion, said arms being adapted to be received over the upper edges of the side walls of the container and said arms including depending lips at the extremities thereof to maintain said arms in engagement over the upper edges of the side walls, and said central portion being enlarged relatively to, and depending from, said arms,

said food storage and cooking bag comprising:

opposed sheets of plastic material joined along the opposite longitudinal edges thereof, a plurality of lateral seals extending across a first end of said bag to define a handle at said first and thus upper end of said bag, and a tearable seal along at least the lower end of said bag, said bag further including a pair of indentations in the opposite longitudinal edges thereof adjacent the upper end to define a reduced neck portion of said bag beneath the handle defined by the lateral seals,

said central portion of said element including a slot of a length approximately equal to the width of the reduced neck portion of the bag and of a width slightly in excess of the thickness of said opposed sheets of the bag,

said bag being received at its upper end through the said slot and said element engaging the bag in the reduced neck portion thereof whereby when said arms of said element are received over the upper edges of the container side walls, the bag is suspended beneath the element for immersion in the liquid while the bag handle remains accessible above the liquid, said element and bag handle thereby facilitating removal of the bag from the container,

said tearable seal, when torn, opening the lower end of the bag and said bag handle facilitating grasping of the bag for withdrawal through said slot, said element thereby extruding the contents of the bag from the opened lower end thereof and said slot of said element further including enlarged portions at opposite ends thereof to accommodate the bag ma-

7

terial in the portions of a width exceeding that of the reduced neck portion to facilitate the said withdrawal of the bag through the slot.

2. An element as recited in claim 1, wherein said slot is formed in said element to be disposed in a generally horizontal plane when said element is positioned in use on a container.

3. An element as recited in claim 1, wherein said slot

8

is formed in said element to be disposed in a generally vertical plane when said element is positioned in use on said container.

4. An element as recited in claim 1, wherein there is provided a strengthening rib along each of the exterior edges thereof.

* * * * *

10

15

20

25

30

35

40

45

50

55

60

65