May 7, 1957 L. BARNETT 2,791,505

INFUSION PACKAGES

Filed Nov. 17, 1954 3 Sheets-Sheet 1

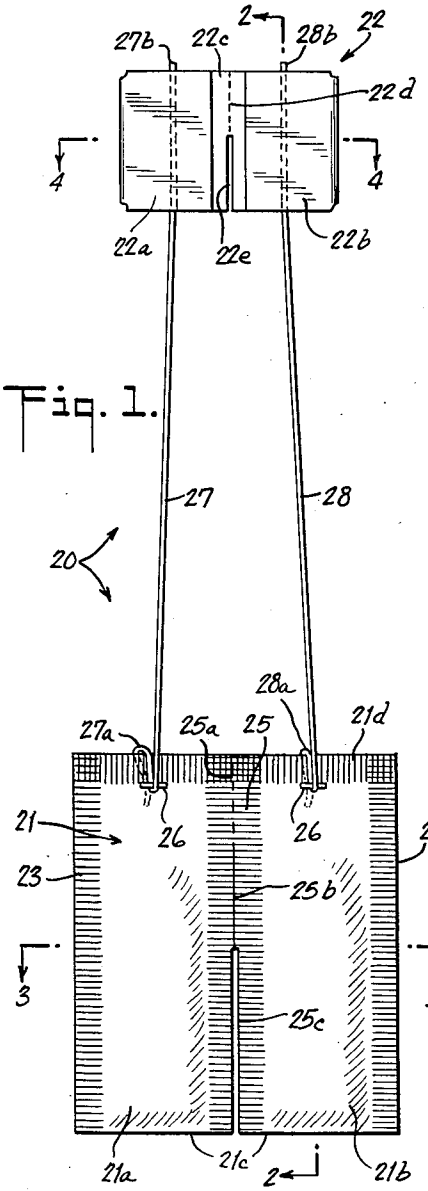


Fig. 1.

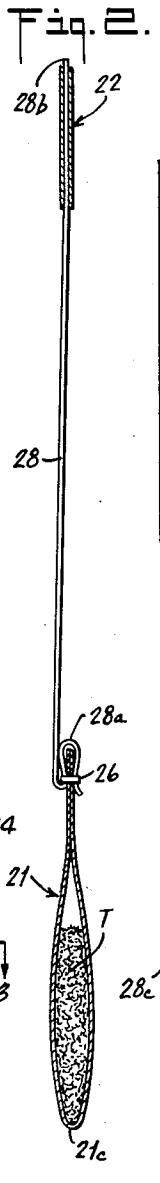


Fig. 2.

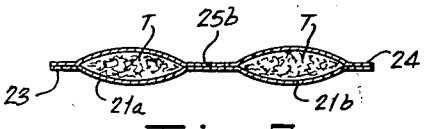


Fig. 3.

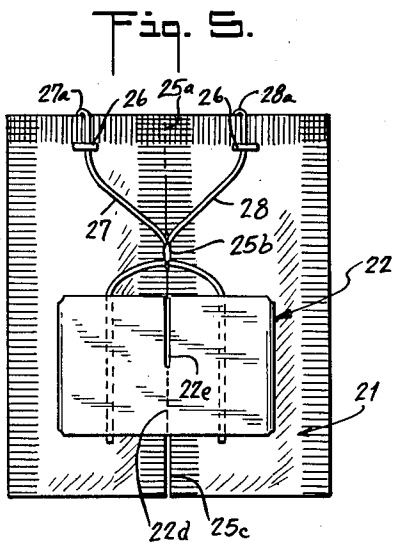


Fig. 5.

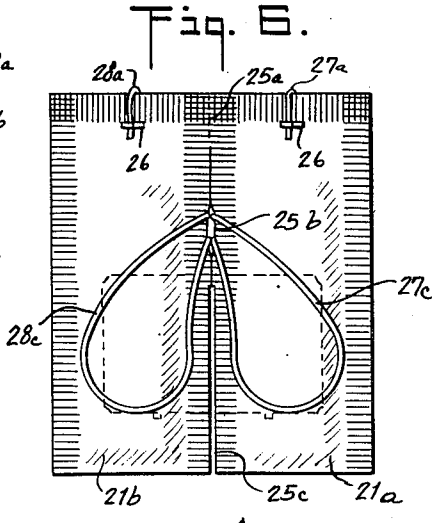


Fig. 6.

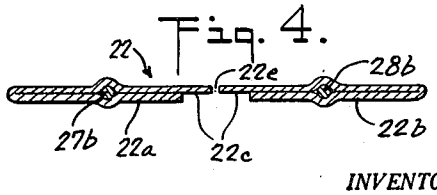


Fig. 4.

INVENTOR.
LOUIS BARNETT

BY

Barnett & Barnett
ATTORNEYS

May 7, 1957 L. BARNETT 2,791,505

INFUSION PACKAGES

Filed Nov. 17, 1954 3 Sheets-Sheet 2

Fig. 7.

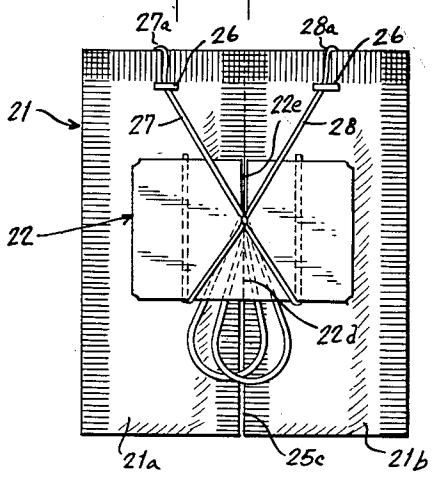
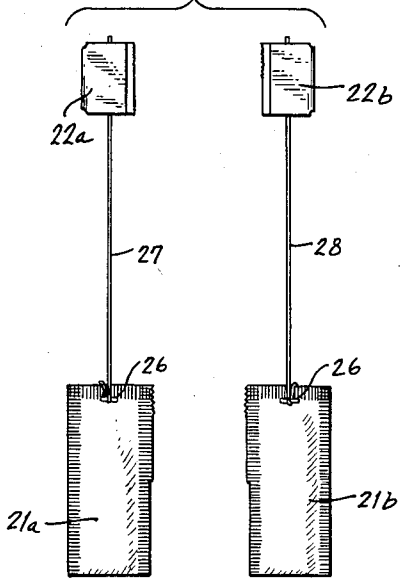


Fig. 8.



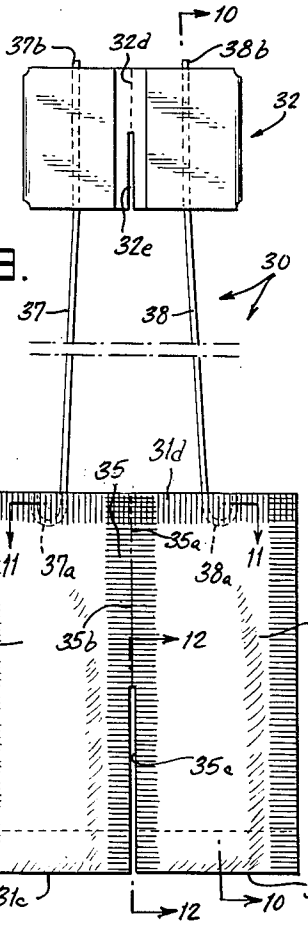


Fig. 9.

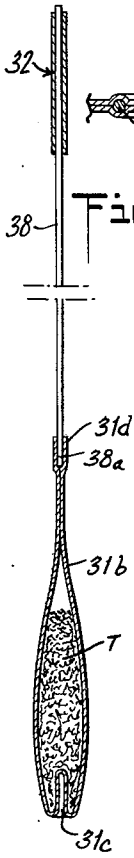
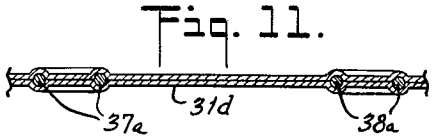


Fig. 10.

Fig. 11.



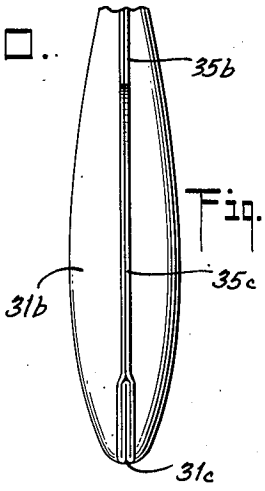


Fig. 12.

INVENTOR.
LOUIS BARNETT

BY

Barnett & Barnett
ATTORNEYS

May 7, 1957 L. BARNETT 2,791,505

INFUSION PACKAGES

Filed Nov. 17, 1954 3 Sheets-Sheet 3

Fig. 14.

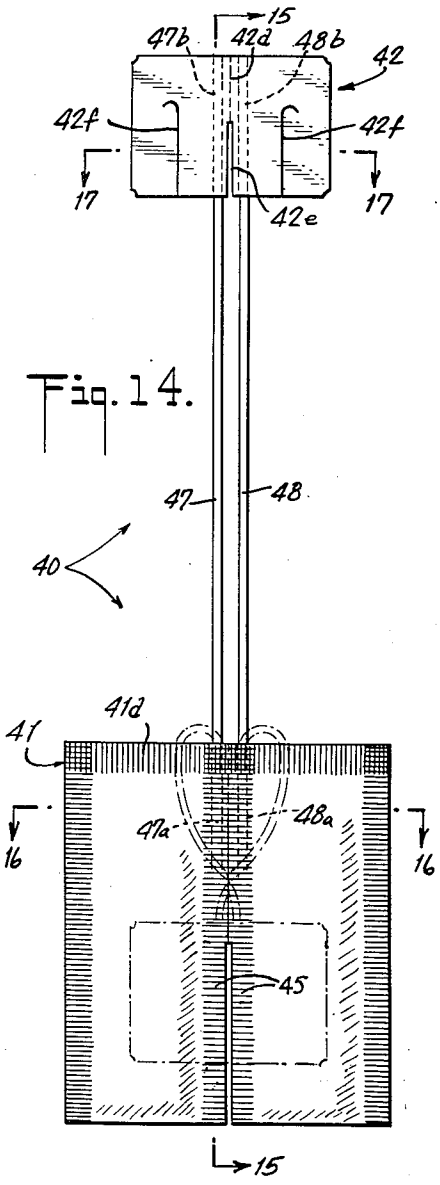


Fig. 15.

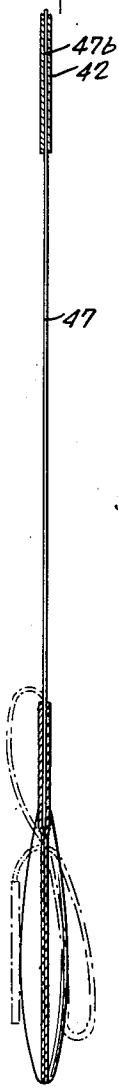


Fig. 13.

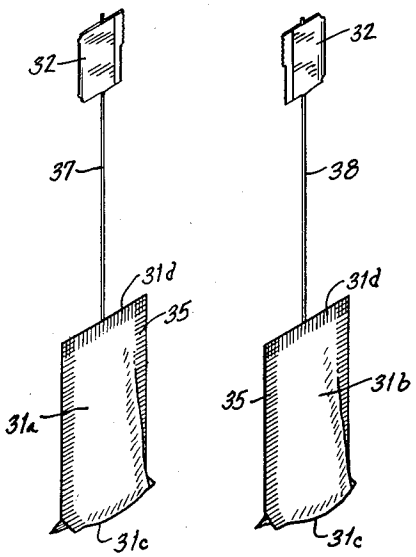
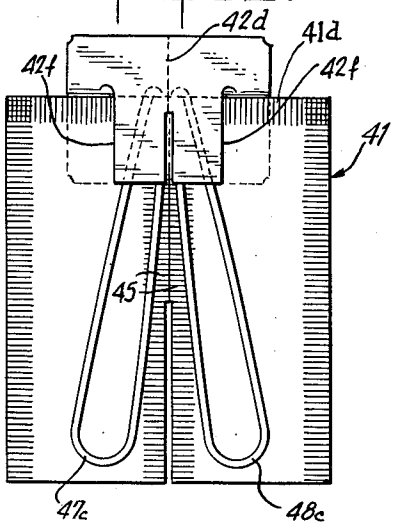


Fig. 18.



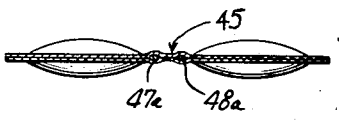
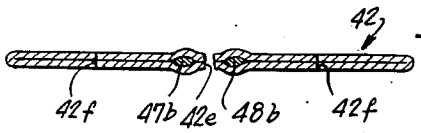


Fig. 16.

Fig. 17.



INVENTOR.
LOUIS BARNETT

BY

Barnett & Barnett
ATTORNEYS

United States Patent Office

2,791,505

Patented May 7, 1957

2,791,505

INFUSION PACKAGES

Louis Barnett, Brooklyn, N. Y., assignor to National Tea Packing Company, Inc., Long Island City, N. Y., a corporation of New York

Application November 17, 1954, Serial No. 469,406

6 Claims. (Cl. 99—77.1)

This invention relates to the manufacture of filled containers or bags and more particularly is directed to an improved siamese twin or twosome, that is, a pair of infusion package units suitable for use as tea or coffee balls and the like, which can be selectively used as a single whole, or in separate half-part units, each complete with a string-handle and tag.

Among the objects of the invention is to generally improve infusion containers or bags in the form of twosome or twin infusion packages of the character described, each whole package being readily convertible for use when desired into two complete tea or coffee balls with individual string handles and tags, which shall comprise few and simple parts, which shall be easy and cheap to manufacture, which shall be capable of quantity production on automatic high speed packaging machines, which shall incorporate as an integral part of the filled container body portion and/or tag means for releasably retaining the string-handles in non-tangling position, and which shall be efficient and practical to a high degree in use.

Other objects of the invention will in part be obvious and in part hereinafter pointed out.

The invention accordingly consists of features of construction, combinations of elements and arrangements of parts which will be exemplified in the constructions hereinafter disclosed, the scope of the application of which will be indicated in the claims following.

In the accompanying drawing in which various embodiments of the invention are shown:

Fig. 1 is a front elevational view of a twosome or siamese twin infusion package such as may be readily converted into two half-part units with double string-handles and divisible tags embodying the invention showing the latter extended suspending the entire package for manipulation during infusion.

Figs. 2, 3 and 4 are cross-sectional views taken on lines 2—2, 3—3 and 4—4, respectively, in Fig. 1, Fig. 4 being enlarged to show details of the tag divisional construction.

Figs. 5 and 6 are front and rear elevational views, respectively, of the improved infusion package in Figs. 1 to 4 showing the non-tangling positioned double string-handle extending by loop shortening between the two half-parts thereof and the divisible tag against the package bag portion.

Fig. 7 is a front elevational view of an infusion package like that shown in Figs. 5 and 6 except that the double string-handle is non-tanglingly positioned to extend by loop shortening through the divisible tag and against the package bag portion.

Fig. 8 is a front elevational view showing the infusion package like that shown in Figs. 1 to 4 converted converted into two equal parts by division of the body portion and the tag to provide two complete half units.

Fig. 9 is a front elevational view of a modified construction of an improved siamese twin infusion package embodying the invention as applied to a bag portion formed with an expandable bottom tag portion and string-handle ends anchored in the top heat-sealed seam of the package body portion.

Figs. 10, 11 and 12 are cross-sectional views taken on lines 10—10, 11—11 and 12—12, respectively, Fig. 12 being enlarged to show details of the divisible expandable bottom body portion.

Fig. 13 is a perspective view showing the infusion package like that shown in Figs. 9 to 12, converted into two equal parts by division of the expandable body portion and tag.

Figs. 14 and 15 are front elevational and sectional views, respectively, of another modified construction of an improved siamese twin infusion package embodying the invention as applied to a split plastic band handle construction with the end thereof anchored in the top heat-sealed seam of the package body portion to provide a corner suspension therefor, the band string-handles being shown in dot and dash lines in a non-tangling position, Fig. 15 being taken on line 15—15 in Fig. 14.

Figs. 16 and 17 are cross-sectional views taken on lines 16—16 and 17—17, respectively, in Fig. 14, Fig. 17 being enlarged to show details of the tag divisional construction, and

Fig. 18 is a front elevational view like that shown in Fig. 6, but with the tag mounted to engage the top closure joint seam in another non-tangling position.

Referring in detail to the drawing, 20 denotes a filled siamese twin infusion package constructed and arranged for use as a single whole comprising a sectionalized body portion 21 convertible for use as individual half-part units 21*a* and 21*b*, for example, in the form of a rectangularly shaped tea bag of the pillow type manufactured to embody the invention.

As seen from Figs. 1 to 4, infusion package 20 may have said body portion 21 thereof formed with a bag structure made of suitable filter sheet material folded over on itself to provide a bottom edge fold 21*c* thereof. Thus, there is provided two superimposed or overlying layers of the filter sheet material forming flat side walls of said body portion 21 which may have end marginal edge areas thereof adhesively secured in any well understood manner to form oppositely positioned side edge borders, such as, joint seams or flanges 23 and 24, said body portion 21 also being formed with a central divisible partition joint seam 25 extending midway between said side border joint seams 23 and 24 in parallel relation thereto thereby forming two adjoining filled compartments for said half-part units 21*a* and 21*b*. Said unit compartments when made as an infusion package for brewing tea or coffee may each be partially filled with a contents of an essence containing product T and sealed therein by top border edge closure joint seam 21*d* of body portion 21.

A suitable filter paper sheet for forming body portion 21 may be made of a vegetable fibrous pulp stock having a thermosetting coating or lamina, the latter being such that when made into the tea bag has sufficient wet strength to withstand immersion in boiling water without damage or disintegration and without undue loss of tensile strength. Said filter paper sheet material, when used to form the tea bags, must be such as to permit ready infusion, that is, passage therethrough of the water of immersion for brewing and straining the filling or tea contents T, said sheet material and coating being of such composition that they are non-toxic, insoluble in hot boiling water and impart no odor or taste even to the slightest degree to the brew.

In manufacturing infusion packages for brewing tea, coffee and the like articles, of the liquid immersible expendable type, it has been desirable to include as part of the package some form of handle member to manipulate the same. For example, a tea bag is generally provided with a string 27 or 28 for use during the brewing

operation particularly when carried out in a cup, and may also be provided with a tag 22 as a finial of said string handle 27. The tag 22 may bear a legend, such as, the name or trademark of the manufacturer, grade of the tea, etc. Such handle members with tags, because of certain conveniences, are at the present time most frequently provided, for example, with one end 27*a* of the string-handle 27 suitably anchored to the infusion package top closure joint seam 21*d*.

The present invention is directed to improved constructions having in addition, where desired, the body portion 21 and/or a divisible tag 22 thereof constructed and arranged to function as non-tangling means for releasably retaining looped portions of the string-handle 27 and tag 22 against the body portion 21 to permit the most approved packaging of the infusion packages 20 in containers and facilitating the removal of such packages 20 ready for the brewing.

As here shown, infusion package 20 has secured to mid-portions of the top closure joint seam 21*d* anchored ends 27*a* and 28*a* of the two string-handles 27 and 28, respectively, as for example, by staples 26. Said string-handles 27 and 28 extend in spaced apart relation with said anchor ends 27*a* and 28*a* thereof each overlocking the edge of said closure joint seam 21*d*. Free ends 27*b* and 28*b* of said string-handles 27 and 28, respectively, have securely mounted thereto divisible tag 22.

The latter, as is clear from Figs. 1, 2, 4, 5 and 7, may be attached to string-handle free ends 27*b* and 28*b* in any suitable manner, as for example, adhesively, by cementing, stapling or the like, and when said tag 22 is made to serve as a releasable retaining means in the manner herein described, may comprise an elongated piece of sheet material having opposite end portions 22*a* and 22*b* thereof folded over toward each other with string-handle ends 27*b* and 28*b*, respectively, interposed sandwich-like making firmly secured connections.

Mid-portion 22*c* of tag 22 between said end portions 22*a* and 22*b* thereof may be provided with a centralized tear line 22*d* for separating the tag 22 into two parts, one part for each of said string-handle end portions 27*b* and 28*b*. Tear line 22*d* may be through-perforated to a degree just short of disconnecting said two parts of tag 22 to facilitate conversion of the single whole infusion package 20 into half-part units thereof. The improved releasable string-handle retaining non-tangling features may be formed by simply providing a through-slit 22*e* along a portion of the tear line 22*d* instead of forming the latter entirely of through-perforations.

To facilitate said conversion of infusion package 20, central divisible partition joint seam 25 is also provided with tear line 25*a* which may be through-perforated to a degree short of complete severance of said body portion half-part units 21*a* and 21*b* from each other while retaining the joint closure seam 25 thereat intact. By through-slitting a portion of the tear line in place of perforating same, as at 25*b*, an improved releasable string-handle retaining non-tangling means is provided, as is clear from Figs. 1 to 4.

Where the method of manufacturing Siamese twin packages 20 makes it more feasible to slip looped string-handles 27 and 28 into said slit 25*b* rather than to thread the same therethrough, the end thereof may be enlarged to form a slot portion 25*c* as an open end for slit 25*b* to give ready access to said slit 25*b*.

The utility of the invention will now be apparent. After manufacturing twosome infusion package 20 in the manner described above for brewing beverages with said body half-part units both charged with tea T, the package 20 may be used as a single whole to properly brew tea of relatively strong or full flavor in the shortest time by holding the tag 22 with the body portion 21 suspended on both string-handles 27 and 28 as shown in Figs. 1 and 2 and simply immersing or subjecting the entire body portion 21 to boiling water in conformance with and as recommended by authorities on the preparation of tea beverages.

However, it is often necessary to prepare a so-called weak or mild brew to suit the taste or demand of the drinker, in which circumstances said package 20 can be readily converted into individual half-part units by readily severing body portion 21 along tear line perforation 25*a* and dividing the tag 22 along tear line perforations 22*d* into two parts. Said package part units 21*a* and 21*b* are thus individually made available, as is clear from Fig. 8, for brewing in the same manner as described for the single whole package 20.

It has been found desirable to deliver filled infusion package 20 to the user with the string-handles 27 and 28 thereof in a non-tangled condition. To that end, the string-handles 27 and 28, in the manufacturing process of complete infusion package 20, may be releasably retained in an effective non-tangling position by either engaging looped portions 27*c* and 28*c* of string-handles 27 and 28, respectively, in said through-slit 25*b*, as shown in Figs. 5 and 6, or in said tag through-slit 22*e*, as is clear from Fig. 7.

It is to be understood that this invention is not only applicable to filled infusion packages for brewing tea and coffee, but is also adapted for use with other products encased in filter sheet material body portions. Thus, for example, a siamese twin filled package, if desired, may contain in one compartment a principal product from which an essence is to be extracted, such as, tea leaves, and in the other a modifying ingredient, such as, either powdered milk, cream, dry fluent sugar, or a dry powdered lemon essence. Said infusion packages 20 are also suitable for mixtures of the said modifying ingredients or soluble medicinal preparations, food seasoning, dyes and the like.

In Figs. 9 to 12, there is shown a modified construction of the improved invention in the form of twosome infusion package 30 convertible into half units 31*a* and 31*b*, as is clear from Fig. 13, having string-handles 37 and 38, the free ends 37*b* and 38*b*, respectively, of the latter terminated by divisible tag 32 attached in the same manner as described for said divisible tag 22.

The latter may be provided with a centralized through-perforated tear line 32*d* and through-slit 32*e* in the same manner described above for said divisible tag 22 of infusion package 20.

Anchor ends 37*a* and 38*a* of the string-handles 37 and 38, respectively, are secured in spaced relation between the adhering parts of the body portion 31 which form top closure joint seam 31*d*, as is clear from Figs. 9, 10 and 11.

Body portion 31 instead of having a bottom edge fold like infusion package 20 is provided with an inturned expansion pleat 31*c* which requires center divisible partition joint seam 35 to extend transversely thereacross, the latter in turn being through-perforated by tear line 35*a* slitted at 35*b* and slotted at 35*c*, as is clear from Figs. 10, 11 and 13.

Another modified construction of improved Siamese twin infusion package 40 embodying the invention is shown in Figs. 14 to 18 having ribbon or band handles 47 and 48 which may be made of strip or flattened plastic thread material instead of a fibre or cotton string. Anchored ends 47*a* and 48*a* of said ribbon handles 47 and 48, respectively, may be secured closely parallel or side by side positioned between adhering parts of infusion package body portion 41 which forms portions of top closure joint seam 41*d* and center divisible partition joint seam 45.

Free ends 47*b* and 48*b* of ribbon handles 47 and 48, respectively, terminate by divisible two part tag 42 which may be attached adhesively, the latter being provided with a through-perforated tear line 42*d* extending between the ribbon handle free ends 47*b* and 48*b*, as is

clear from Figs. 14 and 17 to a degree just short of disconnecting said two part tag 42. The latter may be provided with spaced apart gripping slits 42*f* for releasably retaining the tag 42 and looped mid-portions 47*c* and 48*c* of the ribbon handles 47 and 48 in non-tangling position against the body portion 41 with gripping slits 42*f* detachably engaging over top closure joint seam 41*d*, from which position the tag 42 can be readily dismounted for use, as is clear from Fig. 18.

Infusion packages 30 and 40 each may be used in the same manner as described herein for infusion package 20, and are constructed like the latter except as herein described.

It will thus be seen that there are provided improved Siamese twin or twosome infusion package constructions in which the several objects of the invention are achieved and which are well adapted to meet the conditions of practical use.

As various other possible embodiments of the invention might be made and as various changes in the embodiments above set forth might be made, it is to be understood that all matters herein set forth or shown in the accompanying drawings and described in the specification are to be interpreted as illustrative and not in a limiting sense.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. A Siamese twin infusion package constructed and arranged for use as a single whole, comprising a sectionalized body portion convertible into a twosome of half-part units, strand handle members fastened to a top closure joint seam of said body portion extending therebeyond in parallelly spaced apart relation to serve each half-part unit, and a divisible tag mounted to terminate said handle members, said sectionalized body portion including a center partition joint seam having a tear line through-cut by perforations and an elongated slit extending therealong separable on conversion of said infusion package into half-part units, side edges of said slit serving to releasably retain looped portions of said strand handle members in non-tangling position prior to conversion.

2. The Siamese twin infusion package defined in claim 1 in which said body portion has an inturned expandable bottom side opposite said top joint closure seam through which the center partition joint seam extends, said slit formed to completely sever a mid-portion of the body portion expandable bottom side.

3. The Siamese twin infusion package defined in claim 1 in which said slit terminates in an enlarged open-ended slot portion to facilitate slipping said looped portion of the strand handle members into the slit for said releasable retention therein.

4. A twosome infusion package constructed and arranged for use as a single whole, comprising a sectionalized body portion convertible for use as individual half-part units separated by a tear line, string-handles for said units having anchored ends thereof secured to a top closure seam of the body portion, the other ends of said string-handles terminated by an attached tag having a tear line and an aligning through-opening, the latter having edge portions serving to releasably retain looped portions of the string-handles in shortened non-tangling condition and positioning the tag against the body portion prior to conversion.

5. A Siamese twin infusion package constructed and arranged for use as a single whole, comprising a sectionalized body portion convertible into a twosome of half-part units, individual string-handles fastened to a top closure joint seam of each half-part unit, a divisible tag mounted to terminate said string-handles, said sectionalized body portion including a center partition joint seam, said center partition joint seam and said tag having tear lines through-cut by perforations and elongated slits extending in alignment with said perforations separable on conversion of said infusion package into the half-part units, side edges of said slits serving as means for selectively retaining looped portions of said string-handles in positioning the string-handle and tag in a non-tangling relation against the body prior to conversion.

6. A Siamese twin infusion package constructed and arranged for use as a single whole, comprising a sectionalized body portion convertible into a twosome of half-part units, individual string-handles fastened to a top closure joint seam of each half-part unit, a divisible tag mounted to terminate said string-handles, said sectionalized body portion including a center partition joint seam, said center partition joint seam and said tag having tear lines through-cut by perforations and elongated slits extending in alignment with said perforations separable on conversion of said infusion package into the half-part units, said tag having a pair of secondary slits extending in from a peripheral edge thereof and spaced on opposite sides of said tear line and slit for temporarily grip mounting the tag on the top closure joint seam prior to conversion.

References Cited in the file of this patent

UNITED STATES PATENTS

2,362,459	Barnett	Nov. 14, 1944
2,413,686	Barnett	Jan. 7, 1947
2,571,138	Irmscher	Oct. 16, 1951