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INFUSION BAG

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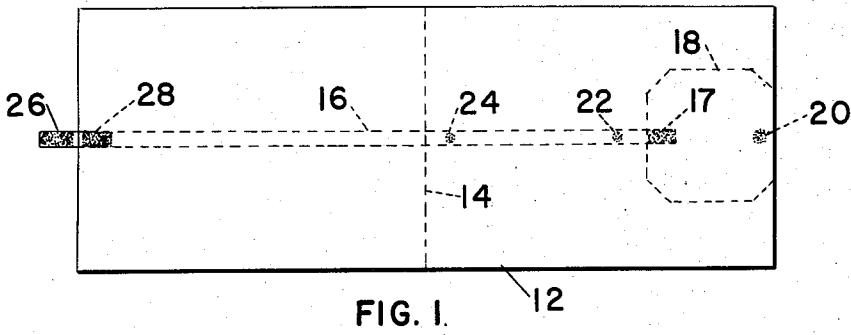


FIG. 1.

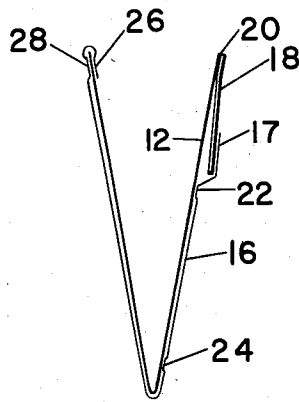


FIG. 2

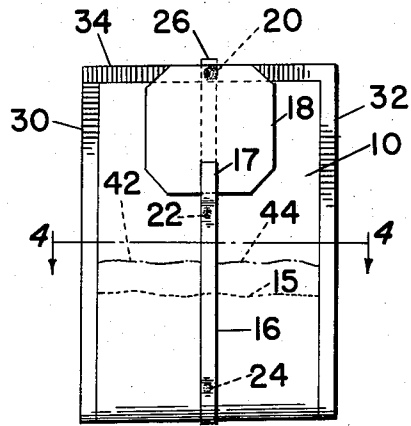


FIG. 3

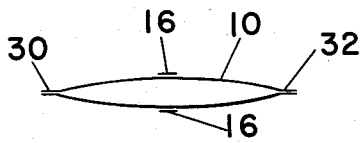


FIG. 4

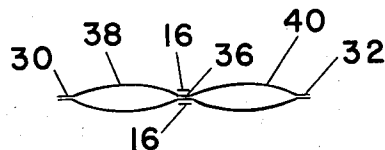


FIG. 5

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INFUSION BAG

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This invention relates to an infusion bag.

The invention has for an object to provide a novel and improved infusion bag having a handle secured thereto in a simple, practical and novel manner.

With these general objects in view and such others as may hereinafter appear, the invention consists in the infusion bag hereinafter described and particularly defined in the claims at the end of this specification.

In the drawings illustrating the preferred embodiment of the invention:

Fig. 1 is a developed plan view of a sheet of bag forming material showing the present handle attached thereto;

Fig. 2 is an end view of the assembly shown in Fig. 1 after folding along a central transverse line;

Fig. 3 is a front view of the completely sealed infusion bag and attached handle;

Fig. 4 is a cross sectional view taken on the line 4—4 of Fig. 1; and

Fig. 5 is a similar view of a modified form of infusion bag.

In general the present invention contemplates an infusion bag of the type produced by folding a rectangular blank of heat sealable filter paper upon itself to form two half sections and joining the side and top edges thereof, preferably by a heat sealing operation after a quantity of the infusion material, such as tea, has been deposited into the bag. The bag forming material preferably comprises a thin porous filter paper embodying a thermoplastic material which becomes adhesive upon being subjected to heat and pressure to cause adherence of the confronting inner faces of the paper. In accordance with the present invention a handle comprising an elongated flexible member having a tag attached thereto is secured to the bag in a manner such as to affix one end of the handle between the sealed mouth portions of the bag, the other end of the handle having the tag attached thereto being wound about the bag and detachably secured in close proximity to the bag whereby to prevent entanglement of the handle with similar bags and handles when packed in a container.

Referring now to the drawings, the present infusion bag is herein illustrated as comprising a flat bag 10 formed from a rectangular blank 12 of heat sealable bag forming material preferably comprising a thin porous paper web having thermoplastic material incorporated therein. In the production of the bag the rectangular bag 12 is folded along a medial line 14 to form two half sections and to present the thermoplastic faces together whereupon the marginal side edges are heat sealed by the application of heat and pressure. A quantity of tea or other infusion material 15 is then introduced into the bag whereupon the mouth of the bag may be heat sealed.

As herein shown, the present infusion bag is provided with a flexible handle 16 comprising a thin and relatively narrow ribbon-like length of paper, cellophane or the like embodying a thermoplastic material so as to be capable of being heat sealed. One end of the handle 16 may be heat sealed, as indicated at 17, to a marginal edge of a

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paper tag 18, preferably of a non-heat sealing type. The other end of the handle 16 may be inserted between the walls of the mouth portion of the bag and secured thereto by heat sealing.

As illustrated in Figs. 2 and 3, in order to secure the handle in close proximity to the bag the handle 16 may be wrapped around the bag, as shown, and the opposed marginal edge of the tag 18 may be lightly heat sealed to the bag at a relatively small sealing area, as indicated at 20. In practice the upper marginal edge of the tag is preferably disposed in alignment with the upper edge of the bag, and the small sealing area 20 occurs at the twofold sealed mouth portion of the bag, the heat seal being effected by virtue of the thermoplastic material in the bag making material. The heat sealable handle 16 wrapped around the bag is also preferably lightly heat sealed to the body of the bag at selected relatively small sealing areas, one sealing area indicated at 22 being disposed immediately below the lower marginal edge of the tag, and another sealing area indicated at 24 being disposed adjacent the lower or folded edge of the bag. It will be seen that the bag and handle thus produced is arranged to maintain the handle and the tag in close proximity to the bag so as to avoid entanglement of the handle with similar bags and handles when packed in a container. It will be understood that the lightly sealed areas 20, 22 and 24 comprise frangible sealing areas which may be readily broken by the consumer without damage to the bag or the handle to extend the tag and handle for use.

Referring now to Fig. 1, in accordance with the preferred method of making the present infusion bag and handle, the paper tag 18 may be placed on the unfolded rectangular sheet of bag making material 12 with a marginal edge of the tag aligned with a transverse marginal edge of the sheet and disposed substantially medially of the longitudinal edges of the sheet. A length of heat sealable handle material 16 may then be placed longitudinally of the sheet in a medial position with one end of the handle overlying the opposed or inner marginal edge of the tag for a short distance. The other end of the handle may extend a short distance beyond the opposed transverse marginal edge of the sheet, the extended portion being indicated at 26. With the tag and handle thus positioned relative to the rectangular sheet of bag forming material the heat sealing operation may be performed: to heat seal one end of the handle to the tag, as indicated at 17; to heat seal the other end of the handle to the transverse marginal edge of the sheet, as indicated at 28; to lightly heat seal the tag to the opposed transverse marginal edge, as indicated at 20; and to lightly heat seal the handle to the body of the sheet at selected areas, as indicated at 22, 24. Thereafter, the assembled sheet and handle may be folded along the medial transverse line 14, and the side edges 30, 32 may be heat sealed. The infusion material may then be deposited into the bag, and after the extended end 26 is folded inwardly over the adjacent edge of the sheet the mouth portion 34 may be heat sealed to seal the extended end 26 between the walls of the mouth portion and to complete formation of the bag and handle. It will be obvious that the step of folding the sheet and handle in their preassembled form effects wrapping of the handle about the bag as illustrated.

In the embodiment of the invention illustrated in Figs. 1 to 4, when a predetermined quantity of infusion material is deposited in the bag it will assume a predetermined level therein as indicated by the dotted line 15 in Fig. 3. It will be apparent that the effective infusion area of the material thus deposited corresponds to the area of the bag material in contact with the infusion material. In a modified form of the invention, as illustrated in Fig. 5 the flat bag may be provided with an additional sealed portion 36 extended medially thereof

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and joining opposed side walls of the bag to form two separate compartments 38, 40. When the predetermined quantity of infusion material is deposited equally in both compartments the material will assume a higher level in the bag compartments, as indicated by the dot and dash lines 42, 44, thus providing a relatively greater infusion area of material in contact with the bag for more efficient infusion.

While the preferred embodiment of the invention has been herein illustrated and described, it will be understood that the invention may be embodied in other forms within the scope of the following claims.

Having thus described the invention, what is claimed is:

1. An infusion bag containing an infusion material comprising a rectangular sheet of filter paper embodying a thermoplastic material and heat sealed along the side edges and mouth of the bag, and a handle comprising a relatively narrow ribbonlike strip embodying a thermoplastic material and having one end thereof heat sealed to one wall of the bag at said mouth, a tag heat sealed to the other end of the handle with said other end terminating within the boundaries of said tag adjacent the lower marginal edge thereof, said handle being wound around the bag and lightly heat sealed to the body of the bag at selected relatively small sealing areas, one of said small sealing areas being located immediately below the lower marginal edge of said tag, the upper marginal edge of said tag being also lightly heat sealed to the bag at a relatively small sealing area, whereby said tag is held in place at both its upper and lower marginal edges and lies flat against the wall of the bag to avoid entangle-

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ment of the tag with similar handles and tags, said relatively small sealing areas comprising frangible seals which may be readily broken to detach the tag from the bag and extend the handle for use.

2. An infusion bag as defined in claim 1 wherein the one end of the handle is folded over one edge of the one wall at the mouth of the bag and terminating within the bag and being heat sealed thereto.

3. An infusion bag as defined in claim 1 wherein the handle is secured to and wound about a central portion of the bag, said tag being disposed with its upper marginal edge aligned with the upper marginal edge of said mouth.

4. An infusion bag as defined in claim 1 wherein the body of the bag is provided with a central longitudinal sealed area providing a two compartment bag.

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