

The needle can form an integral part of the device, or can be screwed, welded or mounted therein by a bead and an annular groove system or can be force-fitted.

An additional feeding tube for addition of vitamins or other substances into the basic food can also be provided on the device according to the invention.

The remainder of the description is given with reference to the drawing Figures.

BRIEF DESCRIPTION OF DRAWINGS

FIG. 1 is a schematic illustration of the device according to the invention according to the first embodiment;

FIG. 2 is a variation of the first embodiment;

FIG. 3 is an illustration of the device according to the invention according to the second embodiment; and

FIG. 4 is an illustration of the device according to the invention according to the third embodiment.

DETAILED DESCRIPTION OF DRAWINGS

In FIG. 1, the device (1) according to the invention is designed to be mounted on a bag (2) containing a liquid product, for example for enteral feeding. This bag is preferably a flexible plastic bag comprising a joint (3) with annular groove. The adjustable portion (4) of the device according to the invention comprises an annular bead for connecting the device (1) to the bag (2). The adjustable portion (4) comprises in its extension a flexible bellows-type system (5) with 5 folds. The needle (6) is coaxial with the portion (4) and the system (5) and is screwed on the end-piece (7). The pipe (8) can be connected to a flexible hose which is in turn connected to the patient to be fed.

The device according to the invention is operated in the following manner: The device (1) is mounted on the joint (3). A retaining member (21) is provided to prevent perforation of the bag during assembly of said device. The end-piece is pushed such as by a finger in the direction of the arrow A until the needle (6) perforates the wall of the bag (2). When the finger is removed, the needle (6) returns to its starting position owing to the particular design of the flexible system (5), the liquid is thus sucked out of the bag (2) and reaches the device round the needle and flows in the pipe (8) towards the patient to be fed. The length of the needle is such that it perforates one of the faces of the bag and not the other. It can therefore be seen that, according to the invention, one is provided with a system which can be manipulated without risk of error by the user and can be assembled on the feeding pouch within only a few seconds.

The same elements have been denoted by the same reference numerals in FIG. 2. The device (10) differs from FIG. 1 in that the needle (9) comprises an opening (11) through which the feeding liquid will flow towards the pipe (12). The principle of use remains the same as before, however.

In the embodiment shown in FIG. 3, the bag (2) comprises a joint (22) with an annular abutment (23). The device according to the invention (24) is fitted on the joint (22). The adjustable portion (25) comprises a spring (26) and an abutment (27). The needle (29) comprises an opening (28). In this version, the seal is produced by the needle (29) inside the joint (22).

When the adjustable portion (25) is on the joint (22), the needle is pushed so that it perforates the bag (2). The spring (26) is compressed by resting on the abutments (23) and (27). When the bag is perforated, the needle is

released and the device returns to its starting position by the force of reaction of the spring (26). The liquid flows through the opening (28) in the needle towards the patients to be fed.

In the embodiment shown in FIG. 4, the bag (2) comprises a joint (14) with two annular grooves (15, 16). The device (13) according to the invention comprises an adjustable portion (17) with a circular bead (18), the needle (19) and the pipe (20). The following procedure is adopted: The device (13) is pushed in the direction of the arrow A until the bead (18) cooperates with the annular groove (15). The needle (19) thus perforates the wall of the bag (2) and the feeding liquid flows into the device. It is merely necessary to withdraw the device (13) into its starting position.

The device according to the invention is simple in design, practical in use, economical, fast, and allows complete drainage of the product on any type of pouch, in particular on a square or rectangular shaped bag. When packaged in sterile manner, it allows the risks of contamination during use to be minimized.

The device according to the invention can also be used for draining containers of liquids for drinks, in which case a valve is optionally provided at the end.

We claim:

1. A device which is adjustable and for being affixed to a joint affixed to a pouch containing liquid for continuously draining the pouch comprising:

an end-piece of the device displaced from an end portion of the device, the end portion being capable of being affixed to a joint affixed to a pouch containing liquid to be dispensed;

means connecting the end-piece with the affixing end portion for reciprocation of the end-piece in a direction towards and in a direction away from the affixing end portion, the end-piece, the reciprocation means, the affixing end portion and the joint defining a void for liquid from a pierced pouch to flow towards the end-piece;

a needle affixed to the end-piece and extending within the void, the needle being affixed to the end-piece for having an axis of symmetry substantially corresponding with an axis of symmetry of the void, being tapered to a point in a direction from the end-piece to the affixing end portion, having a length such that when the end-piece is at a reciprocated position away from the affixing end portion, the point of the needle is displaced away from the pouch but having a length sufficient for penetrating through the joint for piercing the pouch when the end-piece is at a reciprocated position towards the affixing end portion and having a diameter smaller than a diameter of the void; and

a pipe positioned between the end-piece and the reciprocation means for dispensing liquid flowing from a pierced pouch via the void about the needle towards the end-piece.

2. A device which is adjustable and for being affixed to a joint affixed to a pouch containing liquid for continuously draining the pouch comprising:

an end portion of the device capable of being affixed to a joint affixed to a pouch containing liquid to be dispensed;

means connected with the affixing end portion and terminating in an integral end portion for allowing reciprocation of the integral end portion in a direction towards and in a direction away from the affixing end portion, a void being defined by the