

Jan. 12, 1965

I. V. M. CURRY
FEEDER FOR INVALIDS

3,165,241

Filed Jan. 25, 1963

2 Sheets-Sheet 1

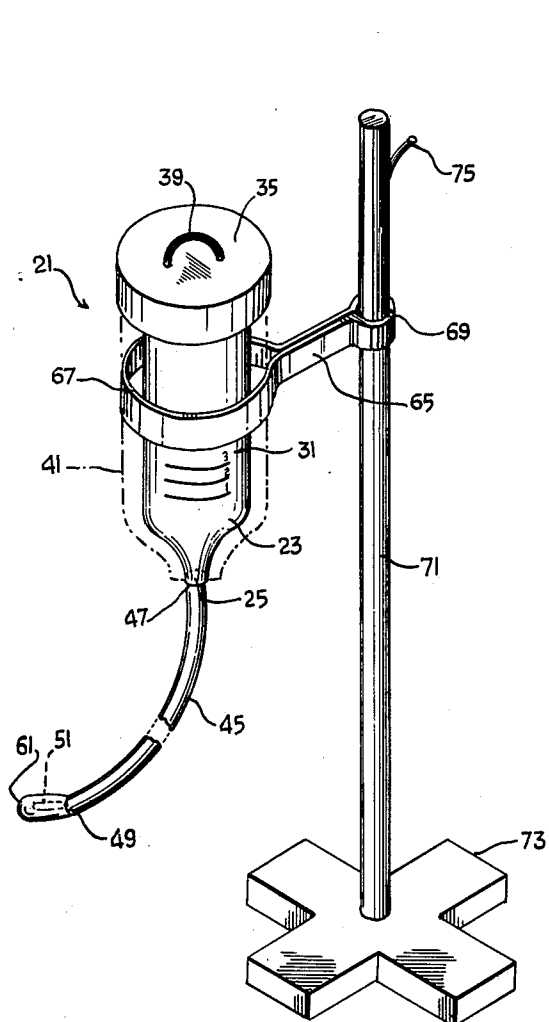


Fig. 1.

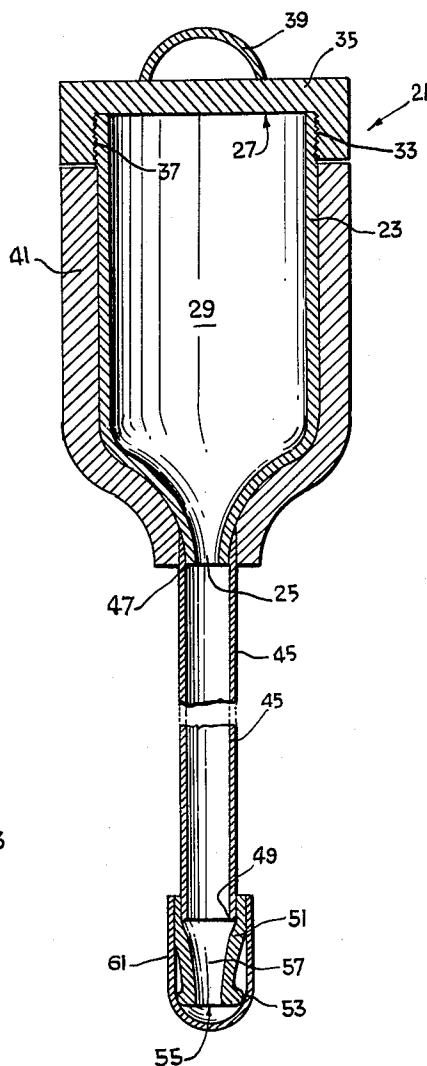


Fig. 2.

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2 Sheets-Sheet 2

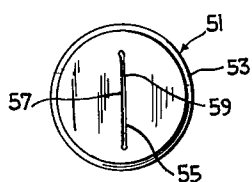


Fig. 3.

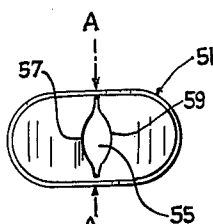


Fig. 4.

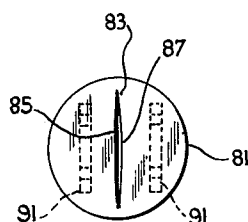


Fig. 5.

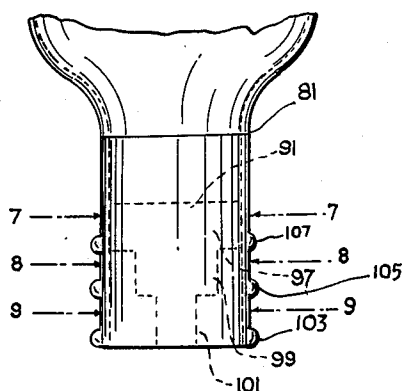


Fig. 6.

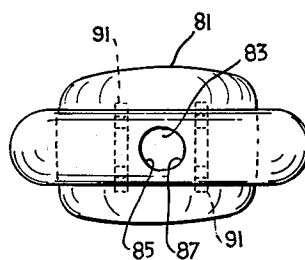


Fig. 7.

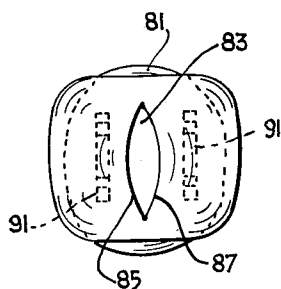


Fig. 8.

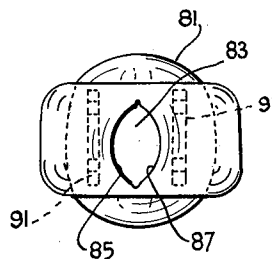


Fig. 9.

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2 Claims. (Cl. 222-490)

This invention relates to food handling devices and more particularly to such devices for handling food in a fluid or semifluid state.

The present invention finds ready application to nursing bottles, adapted for use with a disabled or bedridden patient, to supply same with their nourishment.

When a patient in a hospital is bedridden they often are unable to feed themselves either due to the nature of the injuries or because their condition is so acute that they do not have the control to handle the implements. This is also true for persons who are invalids at home or in nursing establishments. In all of these cases another person must feed the patient. If the patient is in a hospital or other institution the feeding of the patient consumes much time and is very costly to the institution or the patient. If the patient is at home then the person doing the feeding can not accomplish other chores which must be done. Some units have been designed to feed individuals and thereby relieve a person from such a chore, however, these units are peculiarly adapted for feeding infants or for handling purely fluid substances like milk or formula. Furthermore, no control is provided for arresting the flow of such substance so if a disabled patient should attempt to use same an attendant is still required to extract the feeding unit from the patient's mouth and set it in such a way that it does not drip all over the bed.

It is an object of this invention to provide a novel food handling device for use with bedridden or otherwise disabled or invalid persons.

Another object is to provide a novel food handling device which protects the food from substantial change in temperature for short periods of time.

Another object is to provide a nursing unit for handling fluid or semifluid foodstuffs.

Still another object is to provide a novel, insulated, nursing unit, for use with invalid or bedridden patients, wherein the patient can control the flow of the foodstuff from the nursing unit.

Yet another object is to provide a novel, insulated, nursing unit, for use with invalid or bedridden patients, wherein the patient can control the amount of foodstuff flowing from the nursing unit.

The present invention contemplates a nursing unit, for use with bedridden or otherwise invalid patients, wherein a container is mounted in an insulated jacket and suspended in such a manner as to allow the foodstuff to flow under the force of gravity. A tube is attached to the container for directing the flow of the food and a mouthpiece is attached to the end of the tube. The mouthpiece is placed in the patient's mouth and the patient by pressure upon the mouthpiece can start and arrest the flow of the foodstuff. According to another form of the invention the patient can control not only the start and stop of the food flow but the amount of food flow as well. A cover is provided for keeping the mouthpiece in a sanitary condition.

For further comprehension of the invention, and of the objects and advantages thereof, reference will be had to the following description and accompanying drawings, and to the appended claims in which the various novel features of the invention are more particularly set forth.

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In the accompanying drawings forming a material part of this disclosure:

FIG. 1 is a perspective view of a feeding unit which embodies the present invention.

FIG. 2 is a sectional view of the feeding unit.

FIG. 3 is an end view of one form of mouthpiece adapted for use with the feeding unit of FIG. 1.

FIG. 4 is a view of the mouthpiece of FIG. 3 as it would appear to allow foodstuffs to pass therethrough.

FIG. 5 is an end view of a modified form of mouthpiece adapted for use with the feeding unit of FIG. 1.

FIG. 6 is a side view of the mouthpiece of FIG. 5.

FIG. 7 is an end view of the mouthpiece of FIG. 5 with pressure applied along the lines 7-7.

FIG. 8 is an end view of the mouthpiece of FIG. 5 with pressure applied along lines 8-8.

FIG. 9 is an end view of the mouthpiece of FIG. 5 with pressure applied along the lines 9-9.

Referring to the drawings for a more detailed description of the present invention, an embodiment thereof is shown incorporated in a nursing unit adapted for use with a bedridden or otherwise disabled or invalid patient and generally designated by the numeral 21. It should be understood, however, that the hereinafter described application of the invention to a nursing unit is for the purpose of illustration only inasmuch as the subject invention finds ready application to other types of units for conveying foodstuffs to an individual who cannot feed himself.

It is to be understood that a container 23 in the form of a glass jar may be provided with or without insulation and may be attached to a support by means of any suitable manner.

The container 23, in the form of a glass jar having a necked down opening 25 (FIGS. 1 and 2) and a large opening 27 (FIG. 2) at the other end, is adapted to be filled with foodstuffs 29 to a predetermined level as indicated by the numerals 31 marked on the side of the container (FIG. 1). The foodstuff can either be entirely fluid like milk or broth or it may be semifluid like oatmeal or vegetable soup. In actuality any foodstuff which will move under the force of gravity through necked down portion 25 of container 23 can be handled by unit 21.

Threads 33 are provided on the outer surface of container 23 near large opening 27. A cover 35 of insulated material having threads 37 formed therein (FIG. 2) is adapted to be threaded onto container 23 to close opening 27 and maintain the foodstuffs therein sanitary. A handle 39 is provided on the top of cover 35.

A jacket 41 (FIG. 2), shown in phantom in FIG. 1, is adapted for a close fit with the outside of container 23. Jacket 41 and cover 35 are constructed from a material having good temperature insulating properties. When food is consumed in a normal manner there is no reason to protect it from changing temperature. Usually the person who is feeding himself does so at a speed at which any change in temperature in the foodstuff is imperceptible. However, hospital patients, elderly persons in nursing homes, and otherwise bedridden persons must eat slowly and at a rate wherein the foodstuffs will be subject to outside elements and the temperature will be affected thereby. By constructing jacket 41 and cover 35 of an insulating material the foodstuffs in container 23 will be protected from the room temperature for a considerable length of time usually sufficient to maintain the temperature of the foodstuff substantially constant.

A tube 45 (FIGS. 1 and 2) is adapted at one end 47 to be fitted over neck 25 of container 23 and under the corresponding portion of jacket 41, and at the other end 49 to receive a mouthpiece 51 (FIGS. 1, 2 and 3). Mouthpiece 51 is constructed from a resilient material

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such as hard rubber or the like. A lip 53 (FIGS. 2 and 3) is formed around mouthpiece 51 to provide the user with a means of gripping the mouthpiece and maintaining same in their mouth. A long thin passage 55 (FIGS. 2 and 3) is also formed in mouthpiece 51 to provide a means for the foodstuffs to pass from tube 45 to the user. Passage 55 is constructed so that the end thereof, which is positioned in the patient's mouth, will normally be closed (as it appears in FIG. 3). Walls 57, 59 of passage 55 may spread slightly as they approach the inner portion of mouthpiece 51. When pressure is applied to mouthpiece 51 along the lines A—A (FIG. 4) as by the teeth of the user, the walls 57, 59 of passage 55 spread as shown in FIG. 4 to allow the foodstuff to reach the user. Thus the user may control the passage of the foodstuffs through mouthpiece 51 without the use of his hands. In fact, the user by the degree of pressure applied to mouthpiece 51 may control the amount of foodstuffs passing therethrough.

As can be clearly seen from the figures, nursing unit 21 is easily assembled and disassembled and therefore may be cleaned and sterilized as needed. Between feedings and cleanings a cap 61 (FIGS. 1 and 2) is placed over mouthpiece 51 to maintain same clean and sterile.

A bracket 65 is formed with a first ring-shaped end 67 adapted to closely fit around nursing unit 21, and a second ring-shaped end 69 adapted to closely fit around a post 71 held in position by a stand 73 (FIG. 1). The fit between end 69 of bracket 65 and post 71 permits bracket 65 to be positioned at any height along post 71 and thereby nursing unit 21 to be disposed at the proper height for the patient. A hook 75 is formed on post 71. When cover 35 is removed to facilitate filling of container 21 handle 39 thereof may be placed over hook 75 to prevent loss of cover 35 and to keep cover 35 at a convenient place.

A modified form of mouthpiece, generally indicated by the numeral 81, is shown in FIGS. 5-9. A passageway 83 having side walls 85 and 87 is formed in mouthpiece 81 in such a manner that the walls 85 and 87 normally meet at the end of the mouthpiece which fits in the user's mouth thus closing passageway 83. Control plates 91 are formed within the walls of mouthpiece 81 having three steps 97, 99 and 101 longitudinally spaced therealong (FIG. 6). Three lips 103, 105 and 107 are formed on mouthpiece 81 around the outside thereof. Control plates 91 are adapted to determine the extent to which pressure may be applied to mouthpiece 81 to open passageway 83. The position of lips 103, 105 and 107 indicates to the user which section of mouthpiece 81 and thereby which step of control plate 91 is positioned between his teeth. In this manner the user is given a sort of braille indication by which he can control the flow of foodstuffs through mouthpiece 81.

If the user places his teeth beyond lip 107 and then applies pressure along the lines 7—7 (FIG. 6) step 97 of control plate 91 will control the extent of compression which can be applied to mouthpiece 81 to spread the walls 85, 87 of passageway 83. Passageway 83 will open to the degree shown in FIG. 7. If the user desires a faster flow of food then he may position his teeth between lip 107 and 105 and thereby apply pressure to mouthpiece 81 along lines 8—8 opening passageway 83 to the extent shown in FIG. 8. If still faster flow is desired the user may position his teeth between lips 105 and 103 and thereby apply pressure to mouthpiece 81 along lines 9—9 opening passageway 83 to the extent shown in FIG. 9. In any of these positions if the user relaxes the pressure on mouthpiece 81 walls 85, 87 of passageway 83 will close stopping the flow of food from container 21.

In this manner the user has full and complete control over nursing unit 21. No hands are required by the user in order to arrest the flow of food. Should the user fall asleep while eating and with the mouthpiece in his mouth

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he will not have to worry about choking on the food because as he relaxes the pressure on the mouthpiece the food will stop flowing. Furthermore, should the user desire to stop eating he can use his tongue or turn his head to expel the mouthpiece from his mouth and the closed passageway will prevent food from soiling the linen.

While I have illustrated and described the preferred embodiments of my invention, it is to be understood that I do not limit myself to the precise constructions herein disclosed and that various changes and modifications may be made within the scope of the invention as defined in the appended claims.

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

1. In a nursing unit of the class described, a container for holding foodstuff in a fluid or semifluid form and permitting same to flow therefrom under the influence of gravity through a tube, comprising, a mouthpiece for said tube to control the passage of said foodstuff therefrom, said mouthpiece being formed of resilient material, a passageway formed in said mouthpiece, said passageway having spaced walls converging into adjacent positions at the outer extremity of said mouthpiece, said walls when in said adjacent positions obstructing the flow of said foodstuff from said mouthpiece, said walls when pressure is applied in a predetermined direction to said mouthpiece spreading apart to permit the flow of said foodstuff therethrough, control means formed in said mouthpiece to determine the spacing of said walls and thereby the amount of foodstuff which will pass through said mouthpiece, said control means including spaced plates of rigid material, each of said plates having formed thereon step-like formations, said step-like formations determining the extent to which pressure, applied along a line passing through a particular step of said formation, will result in spreading of said walls.

2. In a nursing unit of the class described, a container for holding foodstuff in a fluid or semifluid form and permitting same to flow therefrom under the influence of gravity a tube, comprising, a mouthpiece for said tube to control the passage of said foodstuff therefrom, said mouthpiece being formed of resilient material, a passageway formed in said mouthpiece, said passageway having spaced walls converging into adjacent positions at the outer extremity of said mouthpiece, said walls when in said adjacent positions obstructing the flow of said foodstuff from said mouthpiece, said walls when pressure is applied in a predetermined direction to said mouthpiece spreading apart to permit the flow of said foodstuff therethrough, control means formed in said mouthpiece to determine the spacing of said walls and thereby the amount of foodstuff which will pass through said mouthpiece, said control means including spaced plates of rigid material, each of said plates having formed thereon step-like formations, said step-like formations determining the extent to which pressure, applied along a line passing through a particular step of said formation, will result in spreading of said walls, a plurality of ridges surrounding said mouthpiece, each said ridge corresponding to the position of each of said steps whereby when said mouthpiece is inserted in the mouth of a user said user can determine the position thereof by the feel of said ridges.

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