

PATENT SPECIFICATION

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(54) A MATERIAL DISPENSING MOUNTING BASE ASSEMBLY

(71) We, FOUNTAIN INDUSTRIES, INC., of 922 E. 14th Street, Albert Lea, Minnesota, United States of America; a corporation organized and existing under the laws of the State of Iowa, United States of America, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

The present invention relates to a material dispensing mounting base assembly for use in a material dispensing machine. More particularly, the present invention is concerned with a material dispensing machine which includes a panel of food product cartridges.

The present invention is particularly directed to a machine which will dispense food products in powdered form, e.g. tea, coffee or the like, into a cup or like receptacle.

According to the present invention there is provided a material dispensing mounting base assembly, comprising, a floor having a row of openings extending between the front and rear thereof, a handle unit, as herein defined, movable from front to rear on said floor and a stop element selectively positioned in one of said openings and adapted to engage said rear end of said handle unit to limit travel of said handle unit towards an open position.

As used herein, the term "handle unit" is intended to mean a dispensing unit provided with a handle.

The same cartridge may be used for different food products having different consistencies and is so used, adjustments must be made in the length of the pull of the handle unit to control the amount of food product that is discharged from the cartridge. The cartridge is a throw-away item and accordingly a base assembly may be provided that will co-operate with the cartridge agitator handle for operation of same.

The base assembly may be constructed to allow quick adjustment of as little as a sixteenth of an inch in the agitator handle pull.

This is accomplished by the use of a generally U-shaped clip having its legs received in openings in two rows of openings staggered such that with one leg in one opening in one row, the other leg may selectively be placed in one of two openings in the other row thereby varying the amount of pull for the agitator handle by one-sixteenth of an inch. The openings in one row are labelled by letters while the openings in the other row are labelled with numerals and, accordingly, a cartridge can designate that the stop be set at a particular set of openings indicated by a letter and numeral designation such as G-7. The user of the cartridge utilizing the mounting base can readily place the cartridge in a place on the mounting base with the stop set properly for the correct amount of pull of the agitator handle to dispense the correct amount of food product for each serving.

The present invention will be further illustrated, by way of example, with reference to the accompanying drawings, in which:—

Fig. 1 is a perspective view of a material dispensing machine utilizing the product cartridge mounting base assembly of this invention;

Fig. 2 is a perspective view of the product cartridge mounting base assembly;

Fig. 3 is a top plan view taken along line 3—3 in Fig. 2;

Fig. 4 is a cross sectional view taken along line 4—4 in Fig. 3;

Fig. 5 is a cross sectional view taken along line 5—5 in Fig. 3;

Fig. 6 is an enlarged fragmentary view showing the two rows of staggered openings on opposite sides of the longitudinally extending elongated slot in the floor of the base assembly; and

Fig. 7 is a fragmentary perspective view of a product cartridge positioned on the mounting base assembly.

The mounting base for product cartridges of this invention is referred to in Fig. 2 generally by the reference numeral 10 and in Fig. 1 two mounting assemblies 10 are

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shown in a beverage dispensing machine 12 holding four product cartridges 14. A hot water spigot 16 is provided in the beverage dispensing machine 12.

5 The mounting base assembly 10 includes a floor wall 18, opposite side walls 20, a rear wall 22 and a centre wall 24 separating two product cartridges. The side walls 20 include front oppositely extending wall portions 26 in a plane with oppositely extending wall portions 28 on the centre wall 24. The floor 18 includes upwardly extending rearwardly offset wall portions 30 adjacent the wall portions 26 and 28. The wall portions 30 function as a ledge to support the forward end of the cartridges 14.

15 A pair of handle units 32 are positioned on the floor 18 on opposite sides of the centre wall 24 and each includes a generally U-shaped frame having a rear cross element 34 interconnecting side elements 36. The forward end of the side elements 36 are interconnected by a horizontally extending plate portion 40 having an upstanding pin 42 thereon. The plate portion 40 is integral along its forward edge with a vertical wall portion 44 having a finger engaging portion 46 extending from its upper edge forwardly and downwardly as seen in Fig. 5.

20 The cross element 34 includes a downwardly extending guide element 48 received in an elongated slot 50 running from front to rear in the floor 18. A retainer element 52 is formed on the lower end of the guide element 48 and is of such a size that it will not pass through the slot but will only pass through an enlarged opening 54 at the forward end of the slot 50 for assembly and disassembly of the handle unit 32 relative to the floor 18. It is thus seen that the smooth positive control is maintained over the handle unit 32 as it is reciprocated on the floor 18. The guide element 48 has a thickness approximately equal to the slot 50 to limit lateral movement of the handle unit 32 on the floor 18.

25 The length of the pull stroke of the handle unit 32 is controlled by two rows 60 of openings 62 and 64 being provided on opposite sides of the elongated slot 50. The openings in each of the rows are staggered relative thereto such that a U-shaped stop element 66 may selectively have its oppositely disposed legs 68 and 70 in two of several openings 62 or 64. The openings 62 are designated by letters while the openings 64 carry numerals and thus it is seen in Fig. 3 by the dash line designation that the leg 68 of the chip 66 is in opening E while the opposite leg 70 may be placed in opening 6 or opening 5. Similarly, with the leg 70 in opening 5 the leg 68 may be placed in either opening D or E and with the leg 70 in opening 6 the leg 68 may be placed in either opening E or F. Each opening will vary the

stroke of the handle unit 32 by one-sixteenth of an inch thus giving the operator the ability to dispense a precise amount of product from the cartridge 14.

70 The cartridge 14 is seen in Fig. 7 to include an agitator handle 74 and a forwardly extending handle lip portion 76 having an opening to receive the pin 42 of the handle unit 32. The product in the cartridge 14 is metered therefrom through an opening 78 in a metering agitator 80.

75 Vertical movement of the handle unit 32 is limited at its rearward end against vertical and lateral movement by notched out portions in the forward wall portions 26 and 28 leaving vertical and horizontal wall edges 82 and 84, respectively (Figs. 2 and 3) engaging the adjacent sides of the side elements 36. The bottom floor 18 engages the lower sides of the handle unit 32.

85 A downwardly extending stop plate 90 is provided on the lower side of the floor 18 for assisting in the positioning of a cup (not shown) under the cartridges 14.

90 In operation, it is seen that the handle unit 32 is assembled in the floor 18 by the retaining element 52 being initially placed in registering relationship with the enlarged opening 54 such that it may pass below the floor 18 with the guide element 48 in the elongated slot 50. The space between the front wall portion 30 and the wall portions 26 and 28, as seen in Fig. 5, will allow the cross element 34 on the side elements 36 to pass therethrough when assembling or disassembling the handle unit on the floor 18. The given product cartridge 14 will have an indication of the stroke length required which will be stated in terms of openings in which the stop element 66 should be placed such as G-8, as seen in Fig. 3. Accordingly, the handle unit 32 may be only pulled out until the cross element 34 engages the stop element 66. A different product may require a setting of the stop element 66 in openings E-5, as seen also in Fig. 3 and thus a longer stroke producing more food product will result. The stop elements 66 are of plastics material and will resiliently yield to maintain a frictional fit with the edges of the openings thereby maintaining them in place for engagement by the cross element 34. The entire mounting base assembly may be made from plastics material in any desired colour.

120 In our co-pending Application No. 25883/73 there is described and claimed a material dispensing mounting base assembly comprising a floor having a slot extending between the front and rear thereof, an enlarged opening at one end of said slot, and a handle unit, as defined therein, movable from front to rear on said floor, a guide element on said handle unit positioned in said slot and having a retainer element on the lower end thereof of such a size that it will 130

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WHAT WE CLAIM IS:—

- 5 1. A material dispensing mounting base assembly, comprising, a floor having a row of openings extending between the front and rear thereof, a handle unit, as herein defined, movable from front to rear on said floor and a stop element selectively positioned in one of said openings and adapted to engage the rear end portion of said handle unit to limit travel of said handle unit towards an open position.
- 10 2. An assembly as claimed in claim 1, wherein said handle unit is open between its front and rear end portions and a second row of openings is provided in said floor to provide a pair of parallel rows of openings, and said stop element is substantially U-shaped and each of its legs is positioned in a
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selected opening in a different row of said pair of rows of openings.

3. An assembly as claimed in claim 2 25 wherein the openings in one of said rows are staggered relative to the openings in the other row whereby, when said stop element has one leg in one opening in one row of openings, the other leg may be selectively 30 placed in one of two openings in the other row of openings to vary the amount of travel of said handle unit towards an open position.

4. A material dispensing mounting as- 35 sembly as claimed in any one of claims 1 to 3, substantially as hereinbefore described.

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