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CAKE FILLER

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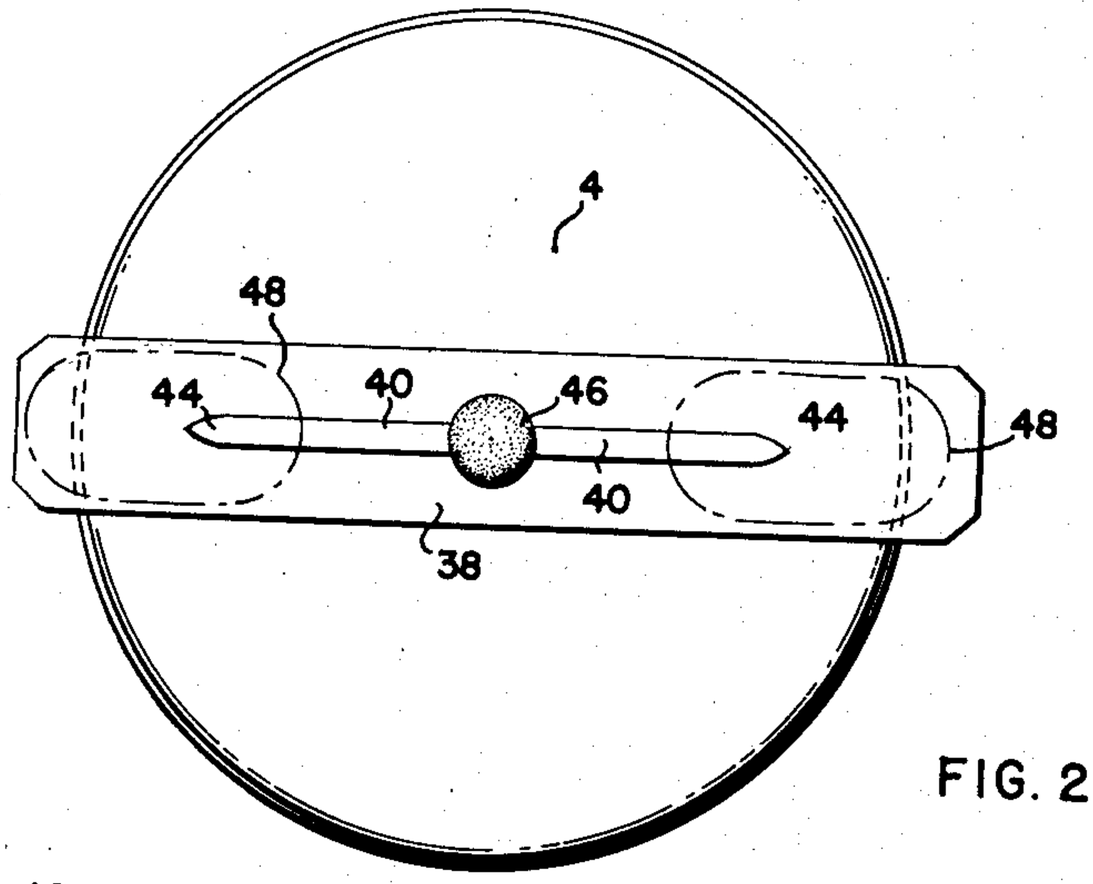

FIG. 2

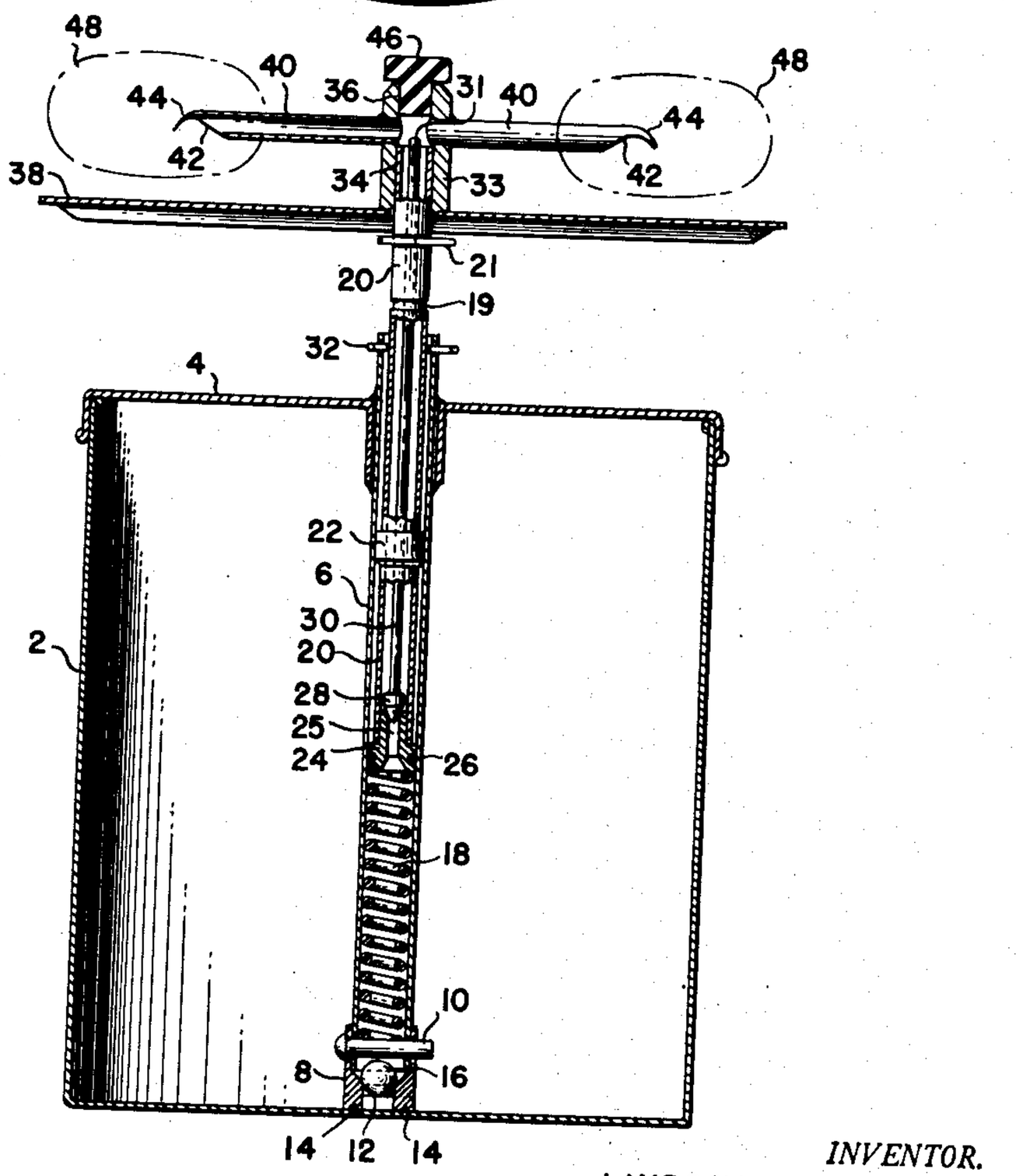

FIG. 1.

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CAKE FILLER

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4 Claims. (Cl. 107—1)

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This invention relates to a cake filler and, more particularly, to a hand operated injector pump for filling cakes, such as doughnuts or other pastries, with jellies or other fillers.

It is an object of the invention to provide a simple hand operated injector pump by means of which two cakes may be filled at the same time.

It is another object of the invention to provide a cake filler which will inject a uniform amount of filler into successive cakes.

It is a further object of the invention to provide a cake filler which may be adjusted to regulate the amount of filler injected into a cake.

These and other objects of the invention will be made apparent from the following description when read in conjunction with the accompanying drawing, in which:

Figure 1 is a vertical section of the cake filler; and

Figure 2 is a top view of the cake filler.

Referring to the figures there is shown at 2 a container for jelly or other cake filler material. Covering the top of the container 2 is a lid 4 and secured to and extending through the lid 4 is a sleeve 6.

A cup 8 is affixed to the lower end of the sleeve 6 by means of a pin 10. The cup 8 includes a central bore 12 and a pair of legs 14 which are adapted to rest on the bottom of the container 2. Mounted within the cup 8 is a ball 16 which is provided to seal off the bore 12 as will be hereinafter described. The spring 18 is contained within the sleeve 60.

An inner sleeve 20 is mounted within the sleeve 6 and has an enlarged portion 22 which is in slidable fit with the inside of the sleeve 6. A member 24 is attached to the lower end of the inner sleeve 20 and is provided with a sealing ring 26 in sealing engagement with the inner wall of the sleeve 6. A bore 25 extends centrally through the member 24. A valve member 28 is attached to the elongated stem 30 and is normally in engagement with the upper portion of the member 24 providing a close-off valve for the bore 25 in the member 24. A wire or sheet metal spring clip 21 is positioned in a circumferential groove in the tube 20. A second clip 32 is positioned in suitable grooves in the tube 6. The spring 18, acting against the lower portion of the member 24, normally urges the inner sleeve 20 upwardly until the upper shoulder of the enlarged portion 22 thereof engages the clip 32, the parts in Figure 1 being shown in a partially depressed condition.

The cylindrical member 33 has an inner bore 34 of greater diameter than the inner bore 36, and is adapted to be positioned over the inner

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sleeve 20, the juncture of the bores 34 and 36 providing a shoulder which rests upon the upper edge of the sleeve 20. Affixed to the lower end of the cylindrical member 33 is a hand plate 38. Mounted within diametrically opposite bores in the cylindrical member 33 are the tubes 40. Each of the tubes has its outer end formed on a non-radial plane as shown at 42, and has a partially turned-in lip 44 extending toward the opposite side of the tube. The top of the cylindrical member 33 is closed off by means of a plug 46.

All of the parts of the apparatus disclosed, with the exception of the sealing ring 26 and the plug 46, are preferably made of stainless steel or other metal suitable for contact with foods. The sealing ring 26 and the plug 46 are preferably made of rubber.

In operating the cake filler, the filling material will be placed in the container 2 and the operator will press two of the cakes to be filled over the ends of the tubes 40, these cakes being shown in the construction line outlines 48. The turned-down lips 44 at the outer ends of the tubes 40 serve to prevent a block of the cake material from entering either of the tubes 40.

After the cakes are positioned as indicated, the operator, still holding the cakes, may rest the outer portions of his hands against the outer ends of the hand plate 38 and press the hand plate downwardly. Downward motion of the hand plate carries the inner sleeve downwardly within the sleeve 6. It will be evident that downward motion of the inner sleeve 20 will cause filler material within the sleeve 6 to pass upwardly within the bore 25 within the member 24, through the interior of the sleeve 6 and out through the tubes 40 into the cakes indicated at 48. Passage of filler material from within sleeve 6 outwardly through the bottom port 12 is prevented by means of the ball check valve 16. Downward motion of the hand plate 38 and the inner sleeve 20 is limited by the engagement of the clip 21 with the upper end of the sleeve 6. The valve member 28 is carried upwardly by the filler material passing upwardly through the tube 22. This upward travel of the valve is limited by engagement of the upper end 31 of the rod 30 with the bottom of the plug 46.

At the completion of the downward stroke, the operator will release his hand pressure from against the hand plate and the spring 18 will urge the inner sleeve 20 and its associated parts upwardly. During this upward motion of the inner sleeve 20, the valve member 28 seals off the bore 25 in the member 24 and filler material from the container 2 is drawn into the sleeve 6 through the bore 12 in the cup 8 and past the ball 16 filling the sleeve 6 as the inner sleeve rises to its

maximum upward position as determined by engagement of the upper shoulder of the enlarged portion **22** of the inner sleeve **20** with the clamp **32**.

From the foregoing it will be evident that an operator may conveniently position himself before the cake filler and pick up two cakes, one in each hand, position them over the tubes **40** at indicated, press the hand plate **48** downwardly to the limit of its stroke and permit it to return to its upper position, thereby filling the two cakes with a metered quantity of filler material. The operator will thereafter remove the filled cakes and pick up two unfilled cakes and repeat the operation. The inner sleeve **20** may be provided with one or more additional grooves **19** for the reception of the clip **21**. It will be evident that, if the clip **21** were inserted into the groove **19**, the stroke of the pump would be reduced and the quantity of filler material injected into the cakes would, therefore, be reduced. Thus, by providing two or more grooves in the sleeve **20** for the reception of the clip **21**, the cake filler may be adjusted to inject various amounts of filler material with each stroke.

It will be evident that the apparatus described provides a simple and efficient cake filler by means of which two cakes may be filled at the same time and which will inject a uniform amount of filler into successive cakes. The adjustability of the amount of filler injected into the cakes is of particular importance in view of the fact that various pastries employ various fillers in various proportions.

The lid to which the cake filler is secured may be made to replace the lid originally provided with the container for the filler material. Thus there is no unnecessary handling of the filler material. The user may conveniently open the container, insert the pump, cover the container with the lid to which the pump is secured and then use the filler material as desired.

It will be evident that modifications can be made to details of the embodiment of the invention described herein without departing from the scope of the invention as set forth in the following claims.

What is claimed is:

1. Apparatus for filling cakes with a filling material contained within a container comprising a cover for the container, a pump extending through the cover into the filling material within the container, the pump including depressible means extending above the cover for actuating the pump, a member attached to and extending transversely of the depressible means, a pair of oppositely extending tubes positioned above and adjacent to the member and connected to the pump, the outer ends of the tubes being adapted to be inserted into a pair of cakes to direct the injection of filling material by the pump into the cakes upon operation of the depressible means, the tubes and the member being positioned with respect to each other so as to permit an operator to depress the member with his hands while holding in his hands two cakes into which the outer ends of the tubes are inserted.

2. Apparatus for filling cakes with a filling material contained within a container comprising a cover for the container, a pump extending through the cover into the filling material within the container, the pump including depressible means extending above the cover for actuating the pump, a member attached to and extending transversely of the depressible means, a pair of oppositely extending tubes positioned above and adjacent to the member and connected to the pump, the outer ends of the tubes being adapted to be inserted into a pair of cakes to direct the injection of filling material by the pump into the cakes upon operation of the depressible means, the outer ends of each of the tubes being formed on a non-radial plane and having a partially turned-in lip extending toward the opposite side of the tube, the tubes and the member being positioned with respect to each other so as to permit an operator to depress the member with his hands while holding in his hands two cakes into which the outer ends of the tubes are inserted.

3. Apparatus for filling cakes with a filling material contained within a container comprising a cover for the container, a pump extending through the cover into the filling material within the container, the pump including depressible means extending above the cover for actuating the pump, adjustable means for limiting the stroke of the depressible means providing for adjustment of the quantity of material discharged by the pump upon depression of the depressible means, a member attached to and extending transversely of the depressible means, a pair of oppositely extending tubes positioned above and adjacent to the member and connected to the pump, the outer ends of the tubes being adapted to be inserted into a pair of cakes to direct the injection of filling material by the pump into the cakes upon operation of the depressible means, the tubes and the member being positioned with respect to each other so as to permit an operator to depress the member with his hands while holding in his hands two cakes into which the outer ends of the tubes are inserted.

4. Apparatus for filling cakes with a filling material contained within a container comprising a cover for the container, a pump mounted on and extending through the cover into the filling material contained within the container, the pump being adapted to rest on the bottom of the container and including depressible means extending above the cover for actuating the pump, a member attached to and extending transversely of the depressible means, a pair of oppositely extending tubes positioned above and adjacent to the member and connected to the pump, the outer ends of the tubes being adapted to be inserted into a pair of cakes to direct the injection of filling material by the pump into the cakes upon operation of the depressible means, the tubes and the member being positioned with respect to each other so as to permit an operator to depress the member with his hands while holding in his hands two cakes into which the outer ends of the tubes are inserted.

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