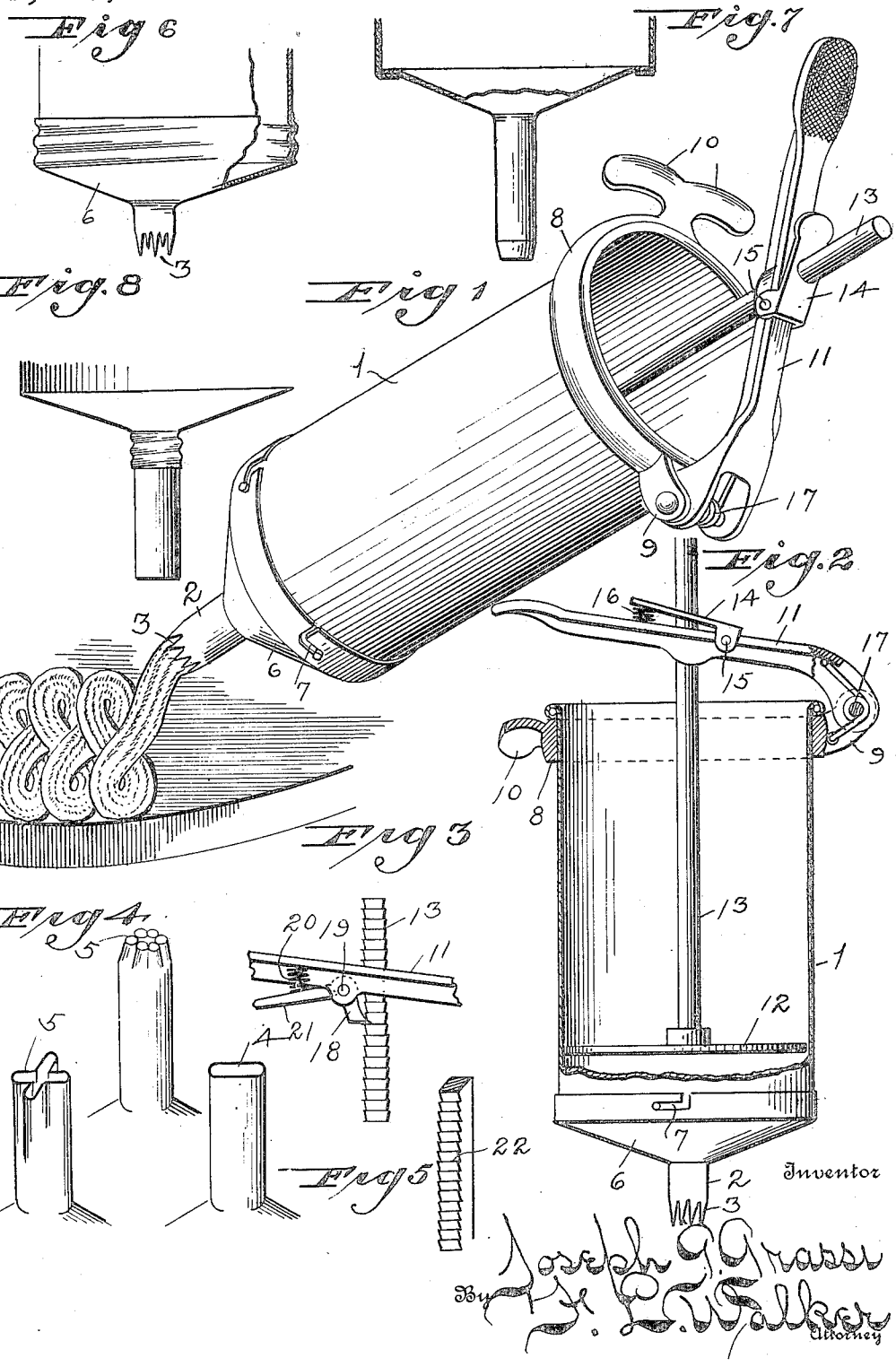
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DEPOSITOR FOR MASHED POTATOES AND OTHER PLASTIC MATERIALS.

APPLICATION FILED SEPT. 15, 1919.

1,397,510. Patented Nov. 22, 1921.



UNITED STATES PATENT OFFICE.

JOSEPH G. GRASSI, OF DAYTON, OHIO.

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1,397,510. Specification of Letters Patent. Patented Nov. 22, 1921.

Application filed September 15, 1919. Serial No. 323,818.

To all whom it may concern:

Be it known that I, JOSEPH G. GRASSI, a subject of the King of Italy, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Depositors for Mashed Potatoes and other Plastic Materials, of which the following is a specification.

My invention relates to culinary appliances, and particularly to a depositor or "gun" for expressing plastic material particularly mashed potatoes in ornamental form, or in measured quantities.

The device forming the subject matter hereof is especially designed for producing artistic or decorative borders about dishes and about the edge of a plank for plank meat, by manipulating the device from side to side or vertically to and from the dish, or by tracing fanciful designs while continuously discharging or expressing the plastic mashed potatoes in an ornamental strand.

The use of mashed potatoes for decorative purposes is old in the culinary art. The usual practice has been to place the potatoes in a cloth bag provided with a suitable discharge nozzle, and to express the contents of the bag through the nozzle by squeezing or contracting the bag in the hands of the operator. This method of operation is not only disagreeable to the operator, but is extremely unsanitary. Mashed potatoes being inclined to sour or spoil quickly, it has been found extremely difficult to keep the cloth bags sweet and clean. Moreover, the manipulation of the bag necessitates direct handling in the hands of the operator, and more or less moisture and potato starch is squeezed through the cloth onto the hands of the operator, and thence into the food being prepared. Moreover, a potato bag is unwieldy and difficult to handle, and manipulate in even regular design, and it requires great skill to discharge the contents uniformly merely by hand pressure on the outside of the bag.

The object of the present invention is to simplify the structure as well as the means and mode of operation of such depositor whereby they will not only be cheapened in construction, but will be more efficient in use, positive in action, easily manipulated and controlled, capable of being operated by unskilled persons, and unlikely to get out of repair.

A further object of the invention is to provide a device which will be sanitary, from which the contents can escape only through the provided discharge nozzle, and which will not tend to drip moisture.

A further object of the invention is to provide improved feeding means, whereby the discharge of the contents of the device may be effected uniformly and continuously, without interfering with the free movement of the device to effect the desired design.

A further object of the invention is to provide a device which can be easily disassembled for cleaning, the several parts of which may be interchangeably employed with reservoirs or containers of different capacity.

With the above primary and other incidental objects in view, as will more fully appear in the specification, the invention consists of the features of construction, the parts and combinations thereof, and the mode of operation, or their equivalents, as hereinafter described and set forth in the claims.

Referring to the drawings, Figure 1 is a perspective view of the improved culinary depositor as employed in effecting ornamental designs of mashed potatoes or like material. Fig. 2 is a vertical sectional view of the assembled device. Fig. 3 is a detailed view of a modification of the feeding pawl. Fig. 4 illustrates several forms of nozzles which may be interchangeably employed with the device for depositing the material in various ornamental designs. Fig. 5 is a further detail of a modification of the piston stem. Figs. 6 and 7 illustrate different modes of detachably connecting the reservoir head, while Fig. 8 discloses a goggle detachably independent of the reservoir head.

Like parts are indicated by similar characters of reference throughout the several views.

Referring to the drawings, 1 is the reservoir or container which is of cylindrical form and may be of any desired capacity. At one end the reservoir 1 is contracted and provided with a discharge nozzle 2. The nozzle 2 may be of any desired formation, whereby it will produce different configuration of the discharge strand. For instance, it may be serrated, as shown at 3 in Fig. 5,

whereby the discharged strand is corrugated longitudinally. These serrations and the consequent corrugations may be of different size, or may be varied in the same nozzle. Likewise the nozzle may be flattened as shown at 4 or may be of other fanciful shape as shown at 5 in Fig. 5. While the nozzle, if desired, may be formed integral with the reservoir 1, in order to facilitate the cleansing of the device and to further enable the use of interchangeable nozzles, to produce different designs, the nozzle is preferably detachably connected with the reservoir. The preferable construction, is that shown in Figs. 1 and 2, in which the entire head 6 or end of the reservoir 1 is detachable. This detachable head 6 may be engaged with the reservoir 1 in any suitable manner. In Figs. 1 and 2, the detachable head 6 is provided with bayonet slots 7, in which are engaged projecting studs or lugs formed on the exterior face of the cylindrical reservoir 1. Alternative methods of connection are shown in Figs. 6 and 7. In Fig. 6 the detachable head is screw threaded at 7′ onto the exterior of the reservoir 1, while in Fig. 7 the reservoir 1 is shown provided with an inturned flange 7″, upon which the head 6′ rests. In this instance the detachable head 6 is inserted within the reservoir 1 through the opposite open end thereof. In lieu of these constructions the head 6 may be integral with the reservoir 1 as shown in Fig. 8 and the nozzle 2′ may be detachably engaged with the head by any of the beforementioned methods, such as the bayonet slot, screw threading or by interlocking flanges.

The reservoir or container 1 is suspended in an annular frame member 8. To this end the reservoir 1 is preferably, though not necessarily provided with a flanged or beaded edge about the end opposite the head 6. The annular supporting member 8 is provided at one side with hinge lugs 9, and at the opposite side by finger grips or a handle 10. Pivoted in the lug 9 is an oscillatory feed lever 11, which projects across the open end of the reservoir 1 into proximity with the finger grips or handle 10.

Provided for reciprocatory movement in the reservoir or container 1 is a plunger or piston comprising a head portion 12 and a stem 13. The stem 13 projects through an eye opening in the feed lever 11, and is engaged with a clutch member 14. This clutch member 14 comprises a plate-like element pivoted at 15 to the lever 11, and having an opening therein, through which the rod or stem 13 projects. Interposed between the free end of the clutch member 14 and the lever 11 is a compressing spring 16, which tends to move the clutch member 14 outward upon the stem 13, and about its pivotal connection 15. The construction is such that as the lever 11 is oscillated inward or toward the frame member 8, the clutch member 14 will engage and bind upon the rod or stem 13, carrying the plunger or piston inward with the movement of the lever 11. However, on the outward movement of the lever 11, the clutch member 14 rides freely upon the stem or rod 13, engaging it for a succeeding movement only upon the reversal of the lever 11. The piston is thus advanced through the reservoir or container 1 toward the end 6 thereof, through a step by step movement. To facilitate the movement of the feed lever 11 outwardly a retracting spring 17 is provided at the pivotal connection of the lever with the frame member 8. This spring tends to move the lever 11 outwardly preparatory to each feeding operation.

The reservoir or container 1 being filled with mashed potatoes, the implement is supported in the hands of the operator by grasping it in one hand adjacent to the head 6.

It may be freely moved and guided to and fro, while the operator engages the handle or finger grips 10 with the finger of the other hand, and the extremity of the feed lever 11 with the ball of the thumb of the same hand, thus by contraction of the same hand, effecting the compression of the contents of the reservoir 1 and the discharge of a portion thereof, through the nozzle 2. Being thus freely supported in the hands of the operator, the device may be guided in any direction, simultaneous with the discharge of the contents of the reservoir. The handle 10 and feed lever 11 are repeatedly squeezed in the hand of the operator advancing the piston intermittently at each compression. The intermittent advance of the piston within the receiver or reservoir compresses the contents thereof, causing the same to be discharged in a continuous strand through the nozzle 2. The ornamental design is produced by guiding the nozzle to and fro during the discharge. The design may be further varied by feeding the material more or less rapidly by regulating the strokes of the feed lever 11. The device is especially designed and will be found quite efficient and desirable in producing a decorative border around planked steaks or fish, but is not limited to such use. It may be employed in the kitchen for serving portions of mashed potatoes or other foods in an attractive and ornamental design or style, or by regulating the length of the feed stroke, portions of food being served may be accurately measured. Likewise it may be employed for depositing pastries in ornamental designs, or in shaping fancy cakes, molding doughnuts or crullers, icing cakes in fanciful designs, and other like purposes.

While the clutch member 14 shown in Fig. 2 is designed to operate upon a smooth rod

or stem 13, other forms of clutch or feeding device and piston stem or rod may be employed. For instance, a pawl and ratchet feed device may be used as shown in Fig. 3. In this instance, the rod or stem 13 if round is provided with a series of corrugations, peripherally disposed, in which engages a feeding pawl 18 pivoted at 19 to the feed lever 11. This pawl 18 is pressed into engagement with the peripheral corrugation 19 of the stem 13, by the spring 20. The pawl 18 is provided with a lateral arm 21, by which it may be manually disengaged from the stem 13, against the tension of its spring 20, when it is desired to return the piston to permit the replenishing of the reservoir 1.

While a round piston rod or stem 13 will be found most economical to manufacture, and will meet all requirements, the stem 13 may be formed rectangular as shown in Fig. 5, and may be smooth for the engagement of the clutch member 14, or may be corrugated as at 22 for the engagement of a feeding pawl as shown in Fig. 3. As beforesaid the reservoir 1 may be of any desired capacity. As a matter of convenience several reservoirs of different lengths, may be provided for use interchangeably with the frame member 8 and the head 6. This will enable the device to be readily adapted to conditions where border designs of greater or less extent are desired.

The step by step or intermittent feed device enables an arcuate regulation of the discharge of the contents of the container 1, whereby the strand of material discharged may be uniform throughout, or may be variably discharged at the will of the operator.

While I am aware that devices have heretofore been devised and used for intermittently discharging various materials such as confections, for filling cream puffs, and like operations, these devices have usually been mounted in a stationary structure or frame, which precludes use for the production of decorative designs, or in some instances they have comprised merely a cylinder and a central plunger with no means for regulating the length of the strokes nor controlling the uniformity of the discharge.

From the above description it will be apparent that there is thus provided a device of the character described possessing the particular features of advantage before enumerated as desirable, but which obviously is susceptible of modification in its form, proportions, detail construction and arrangement of parts without departing from the principle involved or sacrificing any of its advantages.

While in order to comply with the statute the invention has been described in language more or less specific as to structural features, it is to be understood that the invention is not limited to the specific details shown, but that the means and construction herein disclosed comprise but one of several modes of putting the invention into effect, and the invention is therefore claimed in any of its forms of modifications within the legitimate and valid scope of the appended claims.

Having thus described my invention, I claim:—

1. A device capable of being moved to and fro in the hands of the operator for forming plastic material into strands, comprising a reservoir having a discharge orifice at one end thereof, substantially axially alined with the reservoir a plunger in said reservoir, and means for intermittently advancing the plunger through a step by step movement while the device is being shifted to and fro, substantially as specified.

2. A hand supported device for forming plastic material into strands, comprising a reservoir for the material having a discharge orifice at one end thereof, a reciprocatory piston therein, said discharge orifice being projected in the direction of operative movement of the piston, a piston stem, a feed lever supported upon the reservoir, and a clutch connection between the feeding lever and the piston stem adapted to engage the stem to advance the piston toward the outlet orifice when the lever is moved in one direction, but releasing the stem and moving independent thereof in the opposite direction.

3. A hand supported device for forming plastic material into strands, comprising a reservoir open at one end and having a detachable head at the other end, said head having a discharge orifice therein, a piston therein, and means for intermittently advancing the piston through a step by step movement to discharge the contents of the reservoir through said orifice.

4. A hand supported device for forming plastic material into strands, comprising a reservoir open at one end, the reservoir, a piston in the reservoir, means for advancing the piston intermittently through a step by step movement to discharge the contents of the reservoir, and a detachable discharge nozzle of irregular configuration connected with the reservoir capable of producing strands of ornamental designs.

5. A hand supported device for forming plastic material into strands, comprising a reservoir open at one end, the reservoir, a piston in the reservoir, means for advancing the piston intermittently through a step by step movement to discharge the contents of the reservoir, and a discharge nozzle having a serrated outlet orifice through which the contents of the reservoir are discharged in corrugated strand.

6. A hand supported device for forming plastic material into strands, comprising a reservoir open at one end, the reservoir, a

piston in the reservoir, means for advancing the piston intermittently through a step by step movement to discharge the contents of the reservoir, a separable head for the reservoir, a discharge nozzle carried by the head, and means for interconnecting the head and reservoir.

7. A hand supported device for forming plastic material into strands, comprising a reservoir for the material, a discharge nozzle leading therefrom, an annular frame member with which the reservoir is engaged, a feeding lever pivoted to said annular frame member and extending transversely across the open end of the reservoir, a piston in the reservoir, a piston stem connected with the piston, and clutch means on the lever engaging the piston stem at different points throughout its length.

8. A hand supported device for forming plastic material into strands, comprising a reservoir for the material, a discharge nozzle leading longitudinally therefrom, a frame in which the reservoir is removably mounted, an oscillatory feeding lever supported on the frame, a piston within the reservoir, a piston stem, a clutch plate pivoted to the lever, and having an opening therein through which the piston stem extends, and a spring tending to oscillate the clutch plate into inclined relation with the piston stem.

In testimony whereof, I have hereunto set my hand this 2nd day of September, A. D. 1919.

JOSEPH G. GRASSI.

Witnesses:

JOHN DINEEN,

F. L. WALKER.