No. 740,608. PATENTED OCT. 6, 1903.

T. L. VALERIUS.

BUTTER PRINTER.

APPLICATION FILED MAY 28, 1903.

NO MODEL.

Fig. 3

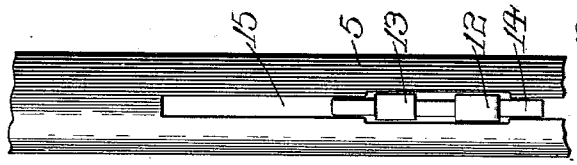


Fig. 4

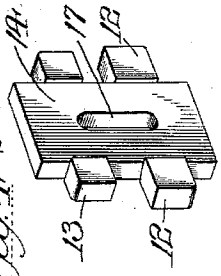


Fig. 2

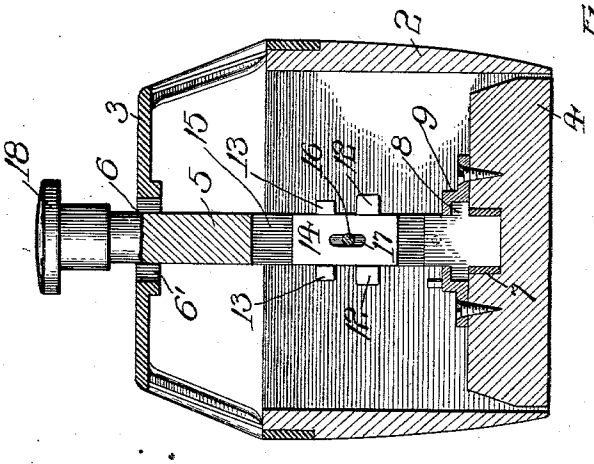


Fig. 5.

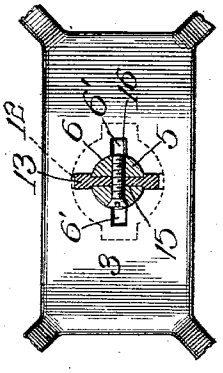


Fig. 1

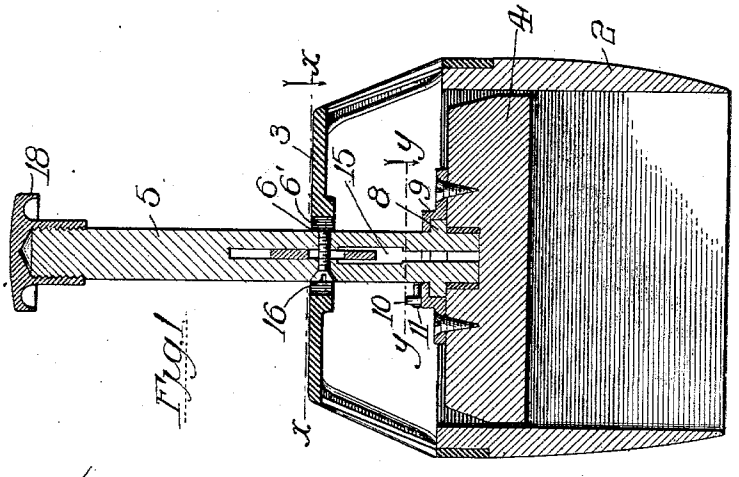
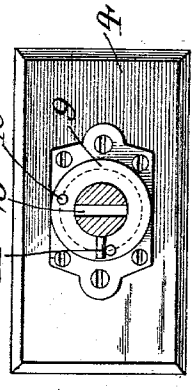


Fig. 6.



Witnesses:

Lute S. Alter,

Edward R. Barrett

Inventor:

Theodore L. Valerius.

By C. H. Hawley

Attorney.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 740,608. Patented October 6, 1903.

UNITED STATES PATENT OFFICE.

THEODORE L. VALERIUS, OF FORT ATKINSON, WISCONSIN, ASSIGNOR TO CREAMERY PACKAGE MANUFACTURING COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

BUTTER-PRINTER.

SPECIFICATION forming part of Letters Patent No. 740,608, dated October 6, 1903.

Application filed May 28, 1903. Serial No. 159,125. (No model.)

To all whom it may concern:

Be it known that I, THEODORE L. VALERIUS, a citizen of the United States, residing at Fort Atkinson, in the county of Jefferson and State of Wisconsin, have invented a certain new, useful, and Improved Butter-Printer, of which the following is a specification.

My invention relates to butter-printers of that class wherein a print-expelling plunger is employed and of that special class in which means are provided for varying the capacity of the mold.

In preparing butter for the market in pats or prints of certain weight, usually one pound each, it frequently becomes necessary to vary the size of the pats made from different lots of butter. The weight of the butter per volume varies from many causes at different seasons and in different parts of the country, and in order to obviate a lack or an excess of butter in the print it is of great value to have a mold the capacity of which may be accurately gaged for a fixed weight of butter. Obviously a butter-printer of this class to be marketable must be adjustable by each user; and the object of my invention is to provide a hand butter-printer that shall be of light weight, of neat and handy form, and of cheap construction, and the capacity of which may be varied according to the relative weight and volume of the butter to be printed.

The particular object of my invention is to improve the plunger locking and adjusting devices of butter-printers.

My invention consists in a butter-printer comprising a mold having a suitable top or frame, in combination with a plunger for expelling butter from the mold, a plunger-stem slidable in the top or frame of the mold and provided with stop or locking lugs engageable with said top or frame.

Further, my invention consists in a butter-printer of the foregoing construction wherein the stop and locking device is adjustable with relation to the stem for changing the position of the plunger in the mold to increase or decrease the capacity of said mold; and, further, my invention consists in various details of construction and in combinations of part, all as hereinafter described and particularly pointed out in the claims.

My invention will be more readily understood by reference to the accompanying drawings, forming a part of this specification, and in which—

Figure 1 is a vertical section of my novel butter-printer, the mold being shown open and the stem and plunger being locked to permit the use of the stem as a handle for forcing the printer into a quantity of butter contained in a tub or upon a table. Fig. 2 is a similar section showing the mold closed, the stem having been released from engagement with the mold-frame. Fig. 3 is an enlarged detail of a portion of the stem. Fig. 4 is a perspective view of the adjustable lugged slide which I use in the stem. Fig. 5 is a horizontal section on the line $x\ x$ of Fig. 1; and Fig. 6 is a horizontal section on the line $y\ y$ of Fig. 1, showing the top of the plunger.

The mold is of the usual form, the novelty of my printer residing in the constructions and relations of the plunger, the stem, and the mold-frame. The mold 2 may be of any convenient size, but is usually proportioned to contain one pound of butter. It is preferably rectangular in cross-section and is made of wood with a metal top or frame 3, the sides of which frame are open for sake of cleanliness. The plunger 4 conforms to the shape of the mold and cannot turn therein, though free to slide up and down in the mold to open the mold or expel a print therefrom. The stem 5 is attached to the plunger and extends through a hole or bearing 6 in the top of the mold. When a round mold is used with a round plunger, the lower end of the stem may be rigidly attached to the top of the plunger; but in the case of a square mold I couple the stem and plunger in a convenient manner to permit the rotation of the stem with respect to the plunger. The top of the plunger is recessed and provided with a metal bushing to receive the lower end of the stem. The rotary connection between the stem and plunger comprises the collar or shoulder 8 on the stem and the recessed plate 9, that is fastened on the top of the plunger. The rotary motion of the stem

is preferably limited by means of the quarter-pins 10 10 on the plate 9 and the top pin or lug 11 on the stem just above the plate. The upward movement of the stem and plunger is limited by one or more lugs 12, provided on the stem and adapted to engage the under side of the frame 3 when the plunger is lifted. For locking the plunger in its raised position, I provide the stem with one or more lugs 13, above the lugs 12 and adapted to pass through the notches 6′ in the guide or opening 6 of the frame. The lugs 13 and said notches are shorter than the lugs 12, and the lugs 12 are not permitted to pass through the notches, but stop against the under side of the frame. When the stem has been brought to this position, it is rotated or twisted to turn the locking-lugs 13 away from the notches and into engagement with the solid part of the frame, surrounding the stem. When thus locked, the stem 5 serves as a handle which may be grasped to force the mold down into a mass of butter. Obviously the mold may be inverted and filled from the top while the stem is thus locked. After the mold is filled and the butter is smoothed across the bottom the stem is turned back until the lugs 13 register with the notches, whereupon it will fall or may be thrust down to expel the print of butter from the mold.

The construction thus far described would constitute a complete and perfect butter-printer and could be made and sold in quantities were it known in advance just what the capacity of the mold should be; but, as before explained, the weight of butter is a variable quantity and in order that the prints made from different kinds and quantities of butter shall be of uniform weight the printer must be of variable capacity. This adjustability as to capacity I secure in the preferred form of my printer by making the lugs 12 and 13 adjustable upon the stem of the printer. An equivalent construction would be an adjustable top for the mold or an adjustable bearing therein to be engaged by the lugs; but I prefer to place the lugs upon a small plate 14, which may be moved in the stem. This plate is bound or clamped within the stem, which being provided with the longitudinal slot 15 and the transverse binding-screw 16 constitutes a clamp to receive and hold the adjustable plate. The intermediate part of the slot is wider than the upper portion thereof and is wide enough to admit the lugs 12 and 13, as shown in Fig. 3. The plate may therefore be passed through the slot in the stem. The plate 14 is of the same width as the stem. It is integral with the lugs 12 and 13, but is thinner and narrower than the same, so that one or each side of the plate has a vertical groove 14′ of the width of the stem. When the plate has been placed in the wide part of the slot and has been pushed up into the narrow part of the slot, which it fits snugly, the inner ends or shoulders of the lugs will engage the sides of the stem, and thus prevent the twisting of the plate in the stem. The plate is provided with a vertical slot 17 to accommodate the binding-screw 16. This slot permits considerable longitudinal movement of the plate to adjust the lugs upon the stem, and when the plate has been properly adjusted the screw 16 is tightened and clamps the sides of the stem against the plate. The head of the screw is countersunk in the side of the stem, so that it does not interfere with the movement of the stem in the bearing 6. It is obvious that the position of the lugs upon the stem determines the point at which the plunger will stand when elevated, and therefore determines the capacity of the mold. The plate is seldom changed after being once adjusted. The stem is preferably provided with a knob 18, and this is threaded for easy removal when it is desired to take the plunger out of the mold.

It is obvious that numerous modifications of my invention will readily suggest themselves to one skilled in the art, and I do not confine the same to the specific constructions herein shown and described.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a butter-printer, the mold top or frame and the plunger-stem in combination with stop and locking lugs provided on said stem and engageable with said frame by relative rotary motion, substantially as described.

2. In a butter-printer, the mold top or frame and the plunger-stem in combination with the stop and locking lugs adjustable longitudinally upon said stem, means for fastening the same thereon and said stem and frame being relatively revoluble to lock and unlock said stem, substantially as described.

3. In a butter-printer, the mold top or frame and the plunger-stem in combination with a lugged plate, longitudinally adjustable on said stem, and said stem being slidable and revoluble in said top or frame, substantially as and for the purpose specified.

4. In a butter-printer, a mold, in combination with a plunger, a plunger-stem and a plunger-locking device, comprising lugs or ears of different lengths and a bearing, said lugs and said bearing being engageable by a relative rotary movement, substantially as described.

5. In a butter-printer, the combination of a mold and its frame, with a plunger having a rotary stem provided with lateral lugs or projections of different lengths movable with said stem to engage said frame and lock the plunger, substantially as described.

6. In a butter-printer, the combination of a mold with a plunger having coupled thereto a movable stem or handle provided with adjustable lateral lugs or projections of different sizes, which, by a relative rotary motion of

said plunger-stem engage with a suitable bearing to hold the plunger in any position, substantially as described.

7. In a butter-printer, a mold and its frame, a plunger, a longitudinally-movable stem for operating the same, a rotary coupling connecting the stem and plunger and a plunger-locking device comprising lugs or ears of different lengths to engage said frame, substantially as described.

8. In a butter-printer, the mold having a suitable top or frame, in combination with the plunger, the stem swiveled to said plunger, said stem and frame having stop and locking parts for engagement and said parts being adjustable to vary the locking position of said stem in said frame, substantially as described.

9. In a butter-printer, the mold in combination with the plunger, the stem provided with a stop-lug attached to said plunger, the mold-frame provided with a notched bearing and the locking-lug adjustable longitudinally on said stem and adapted to pass through said bearing and turn into engagement with said frame, substantially as described.

10. In a butter-printer, the mold having a suitable top or frame, in combination with the plunger, the stem swiveled to said plunger, the lugs adjustable on said stem and one thereof adapted to pass through and engage said frame to support said plunger, when the stem is retracted and turned, substantially as described.

11. In a butter-printer, the mold having a suitable top or frame, in combination with the plunger, the stem rotatably connected to said plunger and capable of partial rotation only, the lug adjustable on said stem and adapted to pass through and engage said frame to support said plunger, when the stem is retracted and turned, substantially as described.

12. In a butter-printer, a mold having a suitable frame, in combination with a plunger slidable only in said mold, a notched bearing in said frame, the stem extending through said bearing and swiveled upon said plunger, said stem having a longitudinal slot, and the lugged member adjustably held in said slot, substantially as described.

13. In a butter-printer, the mold in combination with the plunger, the mold-frame having a notched bearing, the stem extending through said bearing and swiveled upon said plunger, means limiting the rotary movement of said stem, and the plate adjustable within said stem and provided with a lug to pass through the notch of said bearing to lock therewith, substantially as described.

14. In a butter-printer, the mold provided with a central notched bearing, the plunger, the stem extending through said bearing and attached to said plunger, said stem having a longitudinal slot in its lower part, the plate fitting the smaller part of said slot and provided with locking and stop lugs of greater width than said smaller part of the slot and means fastening said plate in the stem, substantially as described.

15. In a butter-printer, the rectangular mold in combination with the rectangular plunger, the mold-frame, the stem having a bearing in said frame, stop and locking means on said stem engageable with said frame, said stem having a bearing in said plunger and provided with a collar or shoulder, the plate on said plunger securing the stem thereto and stop pins or lugs on the stem and plate limiting the rotary movement of said stem, substantially as described.

16. In a butter-printer, in combination, a mold and its frame, a plunger having a slotted stem, said stem passing through and being slidable in said frame, and a lugged plate in said slotted stem and longitudinally adjustable therein, substantially as described.

17. In a butter-printer, in combination, a mold and its frame, a plunger-stem passing through said frame, lugs of different length upon said stem and engageable with the top and bottom of said frame by a rotary movement of said stem for locking same in place, and means whereby said lugs are adjustable on said stem, substantially as described.

18. In a butter-printer, in combination, a mold, a frame, a plunger slidable in said mold, a stem rotatably connected to said plunger and passing through said frame, and adjustable lugs of different lengths on said stem, engageable with said frame for locking said plunger in position, substantially as described.

19. In a butter-printer, the mold-frame having a notched bearing, in combination with the slotted plunger-stem, the screw crossing the slot therein and the plate fitting said slot, provided with a slot for said screw and also provided with stop and locking lugs of greater width than the slot in said stem, the upper lugs upon said plate being of a size to pass through the notches of said bearing, substantially as described.

In testimony whereof I have hereunto set my hand this 21st day of May, 1903, at Chicago, Illinois, in the presence of two witnesses.

THEODORE L. VALERIUS.

Witnesses:
F. J. MACNISH,
C. G. HAWLEY.