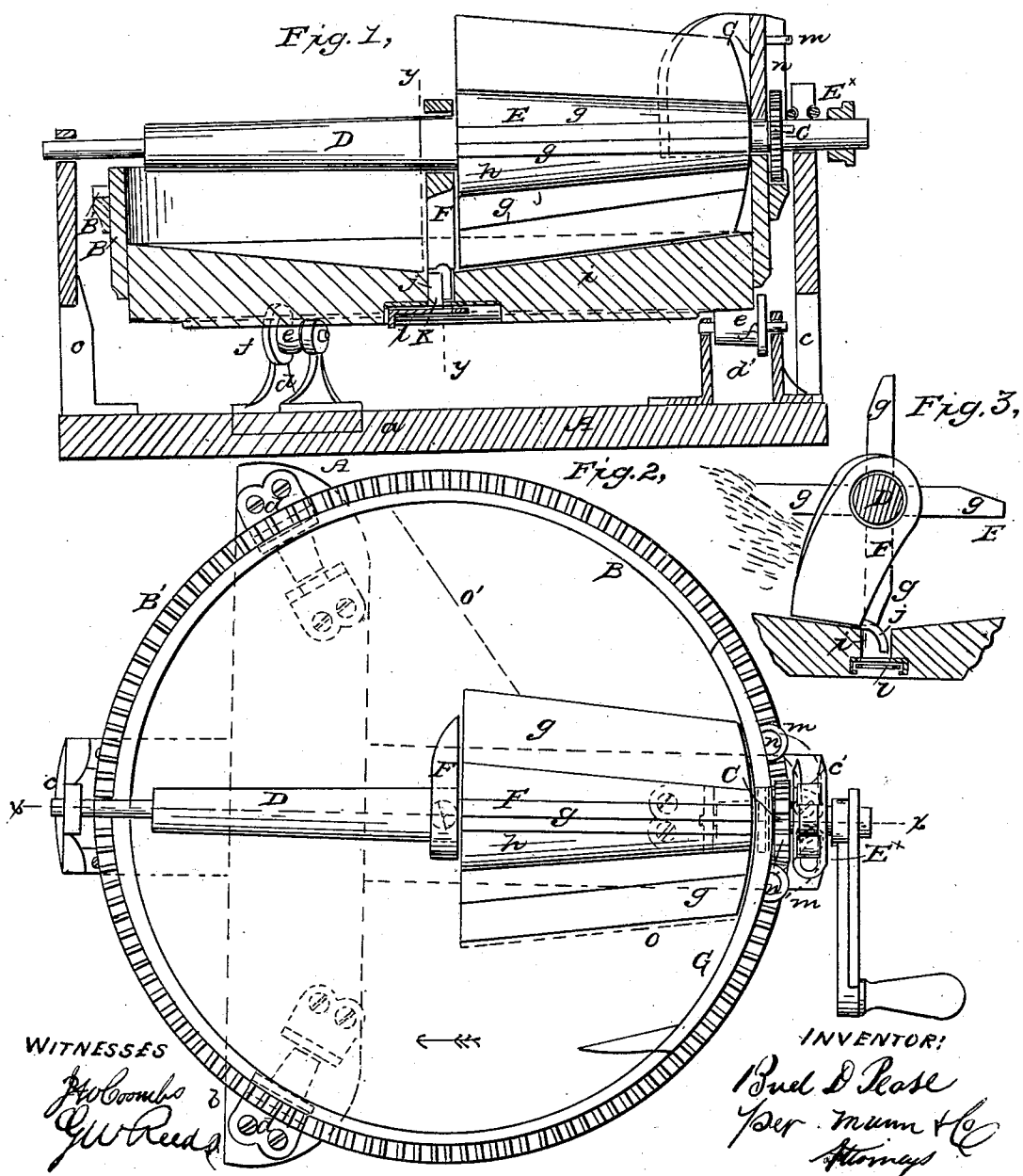


B. D. PEASE.
Butter Worker.

No. 33,794.

Patented Nov. 26, 1861.



UNITED STATES PATENT OFFICE,

BUEL D. PEASE, OF MADISON, PENNSYLVANIA.

IMPROVED BUTTER-WORKER.

Specification forming part of Letters Patent No. 33,794, dated November 26, 1861.

To all whom it may concern:

Be it known that I, BUEL D. PEASE, of Madison, in the county of Luzerne and State of Pennsylvania, have invented a new and Improved Butter-Worker; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a vertical central section of my invention, taken in the line *xx*, Fig. 2. Fig. 2 is a plan or top view of the same; Fig. 3, a section of a portion of the same, taken in the line *yy*, Fig. 1.

Similar letters of reference indicate corresponding parts in the several figures.

This invention consists in the employment or use of a horizontal rotating bowl in connection with a rotary beater arranged for joint operation, substantially as hereinafter fully shown and described, whereby buttermilk, brine, and other foreign liquid or semi-liquids may be expeditiously and thoroughly separated from the butter and the parts composing the device rendered capable of being readily disconnected for the purpose of washing or cleaning them when necessary.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents a bed-piece or framing, which is formed of two bars *a b*, which cross each other at right angles. At the ends of the bar *a* there are secured uprights *c c'*—one at each end—and at the ends of the bar *b* there are secured small metal stands *d d'*, in which friction-rollers *e* are placed, a roller and stand being at each end of the bar *b*. A stand *d'* and friction-roller *e'* are also at one end of the bar *a*, adjoining the upright *c'*. The three rollers *e e e'* are equidistant from each other, and on them a cylindrical bowl or basin *B* is placed, a flange *f* on each roller keeping the bowl in proper position. The bowl or basin *B* has a toothed or cogged rim *B'* secured to its outer side, and into this cogged rim a pinion *C* gears, said pinion being on a shaft *D*, the journals of which have their bearings in the upper parts of the uprights *c c'*. The bearing in the upper part of the upright *c'* is an open one to admit of the shaft *D* being readily removed from the uprights *c c'*. A

key *E**, which slides horizontally in grooves in the upper part of the upright *c'*, retains the journal of the shaft in its bearings. (See Figs. 1 and 2)

On the shaft *D* a beater *E* is placed. This beater is formed of radial wings or blades *g*, attached to a conical hub *h*. The conical form of the hub *h* admits of the outer edges of the wings or blades *g*, which are of equal width throughout, being parallel with the bottom *i* of the bowl directly underneath them, as will be fully understood by referring to Fig. 1. The outer edges of the wings or blades *g* just graze the bottom of the bowl *B*, and the front or face sides of the wings or blades *g* are beveled near their edges, as shown clearly in Fig. 3. The beater *E*, it will be seen, is equal in length to just one-half the diameter of the bowl.

On the shaft *D* there is placed loosely a bar or arm *F*, the lower end of which has a rod *j* attached, said rod fitting in a hole *k*, which is at the center of the bottom *i* of the bowl and passes entirely through it. In the under side of the bottom *i* of the bowl there is placed a slide or gate *l*, by which the hole *k* may be closed when necessary.

G is a guard or fender, which is of curved form, corresponding to a portion of the side of the bowl *B*. This guard or fender is fitted just over the edge of the bowl at the end of the beater, and is secured in proper position by eyes *m*, which are fitted on vertical rods *n n* at the upper end of the upright *c'*. This mode of attaching the guard or fender *G* to the device admits of it being readily detached therefrom for the removal of the shaft *D* and the cleaning of the several parts of the device.

The operation is as follows: The butter to be worked is placed in the bowl *B*, and the shaft *D* is turned by means of a crank at one end. The beater *E* rotates with shaft *D*, and the bowl *B* turns in the direction indicated by the arrow in Fig. 2, through the medium of the gearing *B' C*. The action of the wings or blades *g* on the butter causes the buttermilk, brine, &c., to be expressed therefrom, the liquids passing to the center of the bottom *i* of the bowl, owing to the concave form of said bottom, and escaping through the hole *k*, the gate *l* of which is open. A pan or vessel may be placed underneath the hole *k* to

receive the liquid expressed from the butter. The wings or blades *g* act upon the butter so as to leave it in ridges parallel with the edges thereof, as shown by the dotted line *o* in Fig. 2, and these ridges as they approach the front of beater by the rotation of the bowl pass underneath it in an edgewise position, as indicated by the dotted line *o'*. The butter therefore will be worked in a very thorough and efficient manner, and without breaking or injuring the "grain" thereof, a contingency which would give the butter an oily consistency and greatly deteriorate it in value.

I am aware that corrugated or fluted rollers have been used in connection with both reciprocating and rotating bowls for working butter; but the fluted rollers act upon the butter quite differently from the beater herein shown and described. The fluted rollers grind and break the grain, as their action is a crushing or grinding one, whereas the action of the wings or blades *g* is what may be termed a "pressing" one, precisely similar to that of the ordinary wooden hand-ladle originally used.

The bar or arm *F* merely serves as a guide to direct the butter properly underneath the beater *E* as the bowl *B* rotates, and the guard or fender *G* prevents the splashing or escape

of the liquids over the edge of the bowl, a result which would be liable to occur in the vicinity of the beater *E*.

I do not claim a rotating bowl; nor do I claim a rotary fluted roller in connection with a rotary bowl, for these parts have been previously used for working butter, but operating differently from my invention herein shown and described; but

I do claim as new and desire to secure by Letters Patent—

1. The combination of a rotating bowl *B* with a rotary beater *E*, formed of radial wings or blades *g*, the outer edges of which are parallel with the inclined or concave bottom *i* of the bowl, as and for the purpose set forth.

2. Attaching the guard or fender *G* to the device by means of eyes *m m*, fitted on vertical rods *n n* at the upper part of the upright *c'*, in connection with the key *E'*, for securing the journal of the shaft *D* in its bearing in upright *c'*, whereby the guard or fender, shaft *D*, and beater *E* may be readily detached, when necessary, for cleaning purposes.

BUEL D. PEASE.

Witnesses:

BYRON MOTT,
JAMES WAITE.