(No Model.)

G. H. SMITH.

WORKING BODY CHURN.

No. 512,628. Patented Jan. 9, 1894.

Fig. 1.

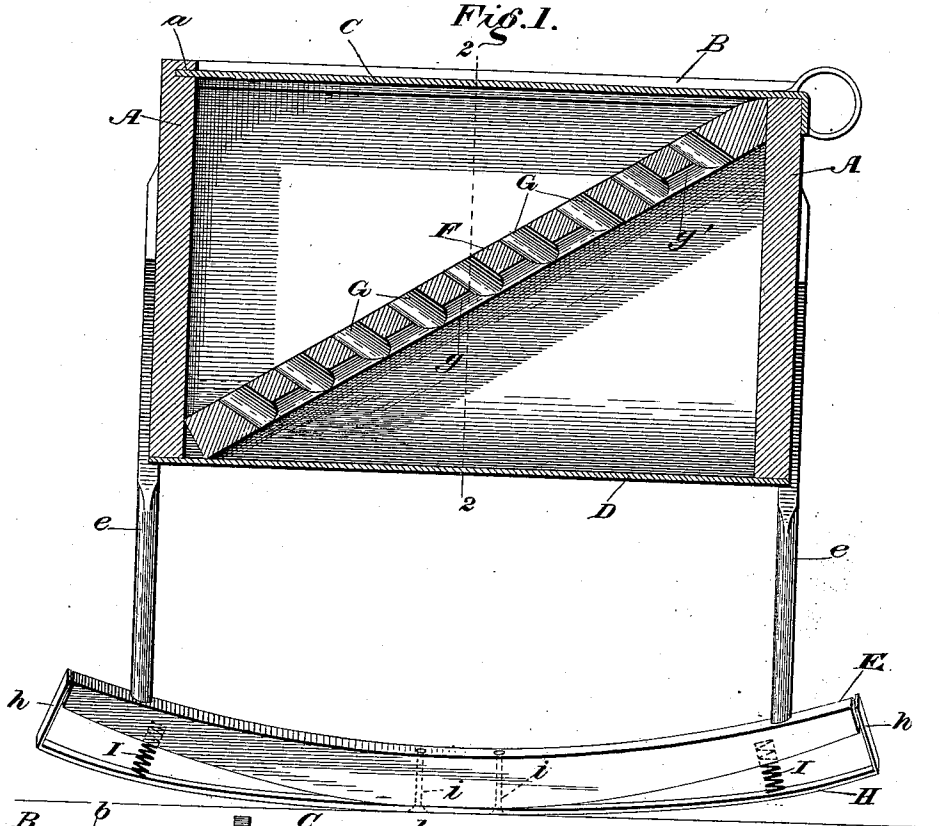


Fig. 2.

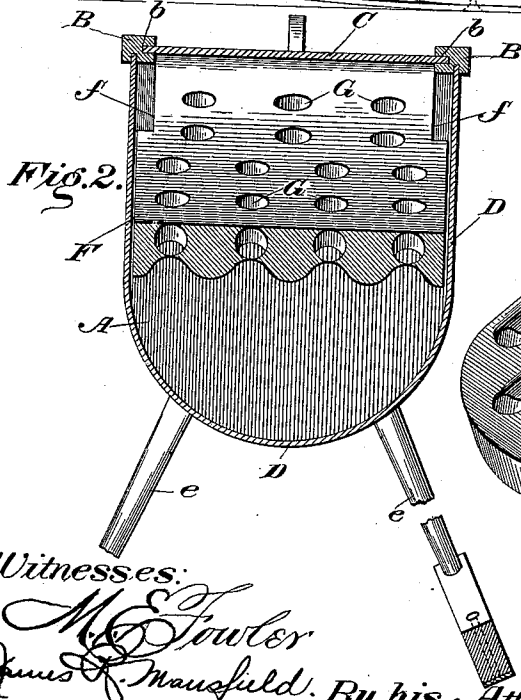
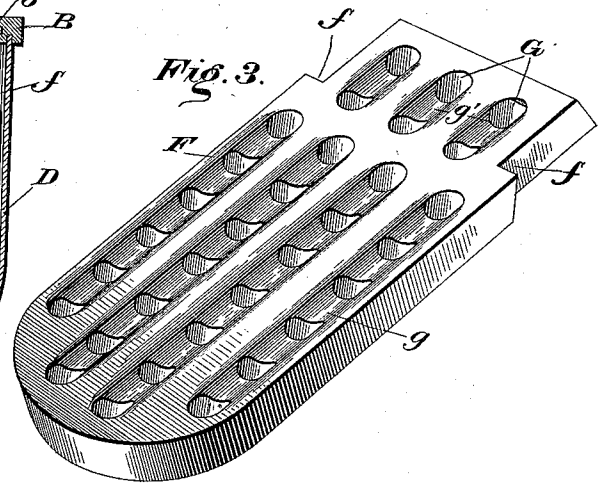


Fig. 3.



Witnesses:
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UNITED STATES PATENT OFFICE.

GEORGE HENNISON SMITH, OF WEBSTER, WEST VIRGINIA.

WORKING BODY CHURN.

SPECIFICATION forming part of Letters Patent No. 512,628, dated January 9, 1894.

Application filed June 15, 1893. Serial No. 477,701. (No model.)

To all whom it may concern:

Be it known that I, GEORGE HENNISON SMITH, of Webster, in the county of Taylor and State of West Virginia, have invented certain new and useful Improvements in Working Body Churns; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

This invention is an improvement in working-body churns, and it consists in the novel construction and combination of parts hereinafter described and claimed.

In the accompanying drawings:—Figure 1 is a longitudinal vertical section through my improved churn. Fig. 2 is a transverse vertical section therethrough on line 2—2 Fig. 1, and Fig. 3 is a view of the division dasher-plate removed.

Referring to the drawings by letter, the churn body is formed of end pieces A, A, half round at bottom, but square at top, and connected at top by two side bars B, B, which have grooves *b*, *b*, in their inner faces to receive the edges of a sliding cover C the inner end of which can enter a groove *a* in the upper part of one end piece, the opposite end piece being cut flush with the bottom of grooves *b*, *b*, so that the cover may fit closely all round when closed.

The sides and bottom of the churn are formed by a metallic sheet D, bent into U-shape, and having its end edges fastened to the end pieces A, A, and its top side edges fastened to the bars B, B, as shown. The body thus has vertical side and end walls, and a semi-cylindrical bottom. The body is mounted on longitudinally disposed rockers E, E, by legs *e*, *e*, as shown, so that it can be rocked endwise.

F represents a removable division dasher plate, placed within the body, lying diagonally therein, extending from the bottom at one end of the body to the top at the other end thereof, and lying flatwise in the body. This plate is rounded at its lower end to fit neatly in the body, and its upper corners are recessed as at *f* to allow it to be readily inserted in or removed from the body. Through the plate are made a number of diagonal openings G, G, which are preferably arranged in series, and are relatively about equi-distant. The under side of the plate has longitudinal grooves *g*, *g'* in it connecting adjoining openings. These grooves assist in dividing the body of the milk, when the body is rocked so as to throw the fluid against the under side of the plate, and to cause it to pass through the openings and thus prevent the milk displacing the plate, or the latter being thrown out of place by impact of milk against its under side. The grooves assist in dividing the cream, and the top of the plate may be also grooved if desired.

Underneath rockers E, and centrally secured thereto by bolts *i* are flat springs H which are not curved so much as the rockers, and their ends *h* may be turned up beside the ends of rockers E as shown. Helical springs I may be interposed between the outer ends of springs H and the rockers, springs I being seated in sockets in the rockers as indicated in Fig. 1. These rockers assist in steadying the churn when not in use and also assist in its vibration when rocked, and at the same time regulate and steady its action.

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

1. The combination of the movable body, with a diagonal removable division plate therein having a series of openings through it at substantially equi-distant points, and grooves on its under face connecting adjoining openings, substantially as described.

2. The combination of the churn body having a semi-cylindrical bottom, with the diagonally arranged plate therein, having its lower end rounded, and also formed with numerous diagonal openings through it and grooves on one face connecting adjoining openings, substantially as described.

3. The combination of the body, its supporting rockers, and cover; with the diagonally arranged plate therein having a series of substantially equi-distant diagonal openings through it, and grooves on its under face connecting adjoining openings, all substantially as and for the purpose described.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

GEORGE HENNISON SMITH.

Witnesses:

B. F. BAILEY,

SCOTT CRAYTON.