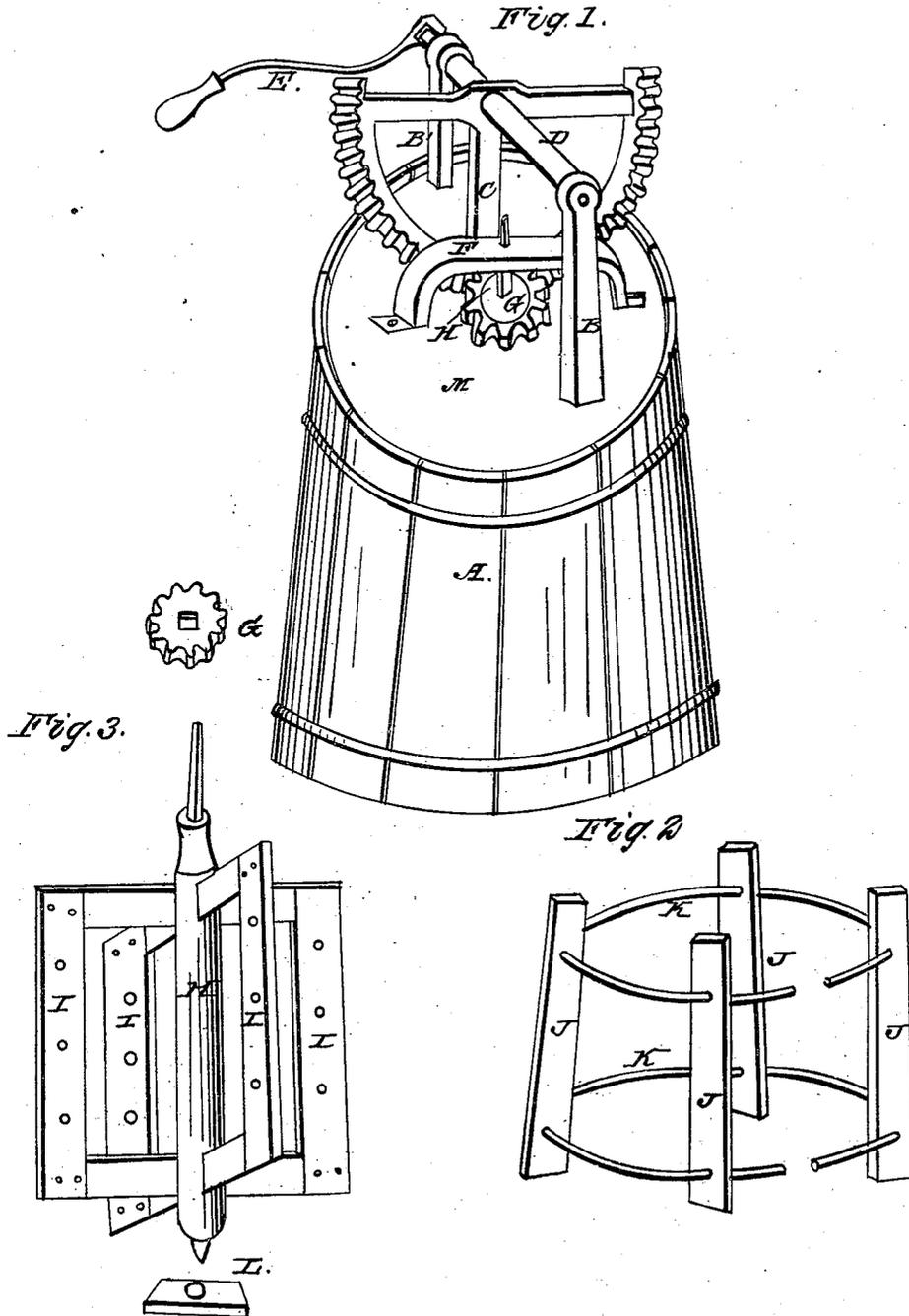


E. P. NEWMAN.

Churn.

No. 77,753.

Patented May 12, 1868.



Witnesses  
August Knoefel  
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# United States Patent Office.

ESAU P. NEWMAN, OF NEW ALBANY, INDIANA.

Letters Patent No. 77,753, dated May 12, 1868.

## IMPROVEMENT IN CHURNS.

The Schedule referred to in these Letters Patent and making part of the same.

Be it known that I, ESAU P. NEWMAN, of New Albany, in the county of Floyd, and State of Indiana, have invented a new and useful Improvement in Churns; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making part of this specification, in which—

No. 1 is a perspective view of churn.

No. 2 is a perspective view of "breakers."

No. 3 is a perspective view of the "paddles" and "pinion" and "step."

A, churn; B B, standards supporting horizontal shaft D, bevel-wheel C, and lever or handle E; F, arch, holding the vertical shaft H to its proper place during the operation of churning; M, top or lid of the churn; G, pinion to work on the upper end of vertical shaft H; I I I I, perforated paddles attached to shaft H; L, step in which the lower end of the vertical shaft H is intended to work; J J J J, breakers attached by steel-wire springs K K.

The nature of my invention consists in providing a breaker for the inside of a certain churn, (herein described,) having a semi-reverse motion, in order to double the effect of the power expended over the old way.

The churn or vessel A may be made of wood or other suitable material. The bevel-wheel C and horizontal shaft D are of solid cast iron, in one piece. Arch F is of cast iron, fastened to the lid M by three ordinary wood-screws at each foot or base. The standards B B are of cast iron, fastened to the lid M with three ordinary wood-screws at the base of each, in the manner in which the arch F is fastened. The lever E is of wrought iron, with a wooden handle attached to one end of the horizontal shaft D by means of a mortise in the end of the lever E, receiving a square tenon made on one end of the shaft D, and secured by a "tap" or "nut" in the ordinary manner. The bevel-wheel C and vertical shaft D are supported and held in proper position by and work in ordinary boxing in the tops of the standards B B. The pinion G is of cast iron, attached or detached at pleasure, to or from the vertical shaft D, by means of a square tapering mortise or eye in the centre, (so that the top, M, may be readily removed when done churning,) antithesis in shape to the square shoulder at the top end of the vertical shaft H. The vertical shaft H is of wood, supplied with a gudgeon of cast iron at the top end, with a spindle to work in the box in the centre of arch F, and a square tapering shoulder to fit loosely, not too loose, in the eye in the centre of the pinion G, and with a gudgeon of cast iron at the lower end to fit and work in the step L; also with four arms of wood fitting closely in mortises made at right angles with each other, through the main body of the said vertical shaft H, at or near the upper and lower ends of the same, and fastened so that the respective ends of each respective arm shall be equidistant from the centre of the motion of the said shaft H, and also with four paddles or dashers I I I I at the ends of said arms, perforated with holes to admit the passage of milk or cream to assist the commotion necessary to produce butter.

L, the step in which the lower point of the shaft H works, is of iron, and inserted in the bottom of the churn A.

The breakers J J J J are of wood, connected by two circular pieces of strong, flexible steel wire, K K, entering each breaker J, near the upper and lower ends, describing the arc of a circle of the same or a little larger diameter of the churn A.

Take off the top, M, of the churn A by grasping the horizontal shaft D with the hand, and, lifting, pour in the milk or cream, and replace the lid or top, M, taking care to guide the spindle or upper point of the vertical shaft H through the eye in the centre of the pinion G, and the box in the arch F; then take the wooden handle, at the end of the lever E, in the hand, and work it upward and downward, producing a semi-reverse motion in the milk or cream, and, being assisted in the commotion by the effect of contact with the breakers J J J J, the effect of the paddles I I I I is doubled, and good butter is produced in eight minutes. Then take off the top, M, as before, lift out the vertical shaft H, remove the butter, and remove the breakers J J J J by pressing the springs K K a little together, and then your churn is ready for cleaning, &c.

What I claim as my invention, and desire to secure by Letters Patent, is—

The breakers J J J J and steel-wire springs K K, as used in connection with the paddles I I I I in churning butter.

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Witnesses:

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