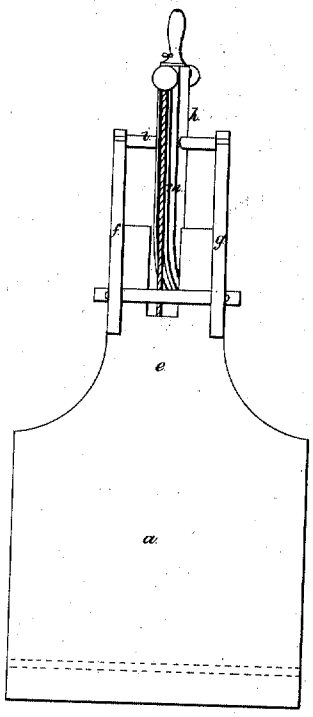
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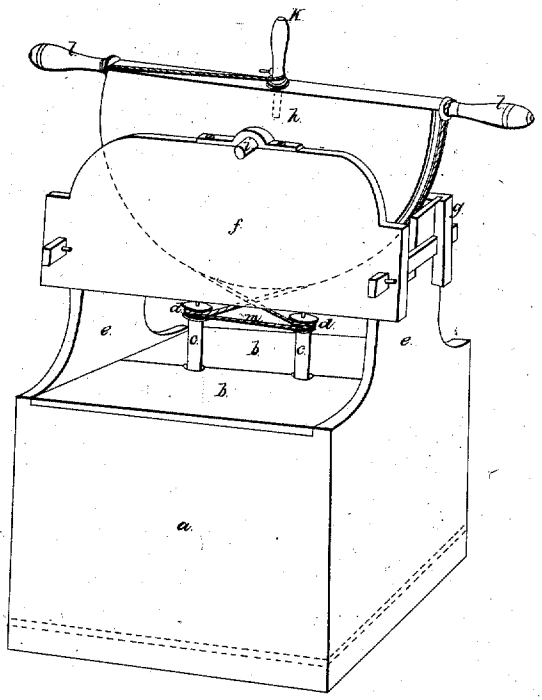
I. Van Cortlet.

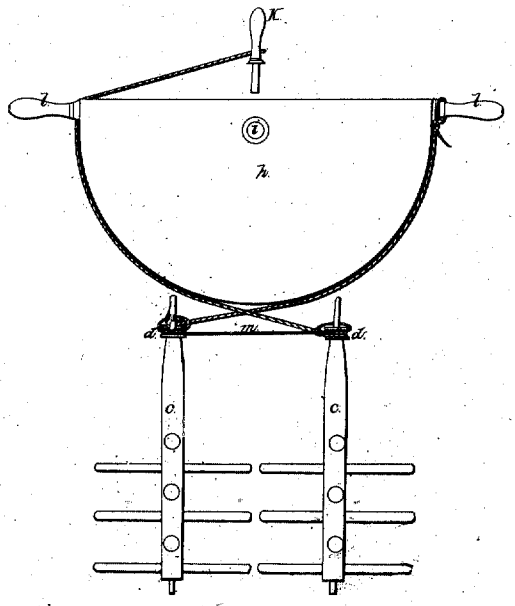
Churn.

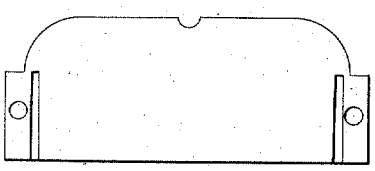
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Patented Jun. 27, 1832.









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Isaac Van Gorder of Warren Ohio

Letters Patent

The Schedule referred to in these Letters Patent and making part of the same containing a description in the words of the said Isaac Van Gorder himself of his improvement in the Churn

To all to whom these presents shall come. Be it known that I Isaac Van Gorder of Warren in the County of Trumbull and State of Ohio have invented a new and useful improvement in the Butter Churn and that the following is a full and exact description of the construction and operation of the said machine as invented or improved by me to wit. The body of the churn is a square box composed of two sides, two ends, a bottom and lid. The side and end pieces are made of boards one and one fourth inch in thickness halved and nailed together at the corners the grain of the wood in the sides running horizontally and of the ends perpendicularly. The width of the sides is nine inches as the length of the ends corresponds with the width of the sides except so much of the end as extends above the body of the churn forming the posts. The bottom one inch in thickness is let into a groove made in the side and end pieces three inches above their lower edge.

The lid consists of two pieces of equal width one inch in thickness and is let into the top of the churn resting on a shoulder

The depth of the churn in the clear is fourteen inches the length twenty inches and the width ten inches. Two round shafts one and one fourth inch diameter are placed in the churn in an upright position the axis of the shafts are exactly in the center of the churn corresponding length ways one fourth the length of the churn in clear from each end, having one half the length of the churn in clear between them.

Pins or rounds pass thro the shafts for the dashers. The shafts play on gudgeons at the lower ends let into the bottom of the churn. At the upper ends of the shafts are gudgeons which play in the lower edge of one of the plates which plate passes lengthways over the center of the churn. Three inches of the upper ends of the shafts are turned two

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and one fourth inches in diameter with a small projecting lip at the extreme top forming pullys round which the cord passes. The dasher is roundly one half an inch diameter and ten inches long. The number of pins in each shaft is six. The first pin is half an inch from the bottom the second at right angles to the first, and one inch above it and so on alternately each one being the one next to it at right angles with the space of an inch between. A post at each end of the churn for the support of the top works, formed by continuing the pieces one distance often inches above the top of the lid. The posts are seven eighths of an inch in thickness and four and a half inches wide at the top the lower part of the post near the body of the churn may be made wider than the top or not to suit the fancy of the workman. Two plates ten and three fourths inches wide and one inch in thickness pass over the churn lengthways tied together at each end by a round or gain passing between the plates close to the insides of the posts. The top edge of the plate is taken out at each corner with a quarter circle so as to leave at the end four and a half inches wide at each end where it rests on the posts. A piece corresponding in width to the thickness of the post and three eighths of an inch deep is made in each end of each plate where it comes against the post and each edge of the posts at the top end is cut off five eighths of an inch wide as low down as the bottom of the plates with a square shoulder for the lower edge of the plate to rest on. A piece of the top of the post in the centre is taken out one and a half inch wide and three and a half inches down for the edges of the wheel to play thro'. The lower edge of the plate is five and a half inches from the top to the lid.

The wheel is formed of a single board and is a segment of nearly one twelfth of a circle of twenty inches diameter. The thickness of the wheel is one inch five semicircular grooves of suitable size for a cord. a fourth of an inch diameter are cut in the edge of the wheel round the circular part. Three handles are attached to the wheel to work it by one in the centre of the straight line

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and meet each comm where the circle and straight line join
A shaft one and 3/4 inch diameter passing through the centre of the wheel
pivots on the ends of which rest in the top edge of the plate.
A cap seven inches long and 2 1/2 inches wide oval in form of an octa-
gal is fastened to the top edge of the plate by two screws for the pur-
pose of steadying the pivots from rising up when the machine is
in operation. The wheel is put in motion by the hand & thence
tion communicated to the shafts by a single cord
The manner of attaching the cord to the wheel and pulleys is as follows.
One end of the cord is fastened to the handle in the centre of the thin
edge of the wheel it passes along the edge to where the circle com-
mences and is laid in the groove next the face of the wheel towards
the pulleys it continues in the groove past one pulley and the fast-
side of the other. here it passes from the wheel to the pulley one
once and a half round it leaving the pulley on the side farthest from
the wheel it passes in a direction opposite to its direction on the
wheel to the other pulley. round which it passes one and a half. thence to
the other groove in the wheel where it continues in its former direction
to the opposite corner of the wheel from where it first entered the
groove here the other end of the cord is fastened
The handle to which the first end of the cord is fastened is made
to turn in order to tighten the cord when necessary. The line of
the face of the wheel when turning must not be exactly parallel to
the side of the churn but turned a little obliquely about three eighths
of an inch in 20 inches. This is necessary in order to bring the edge of
the grooves on the edges of the pulleys. and the edge of the other
groove on the edge of the other pulley. so that the cord may pass from
the wheel to the first pulley, and from the other pulley to the wheel again
without friction moving one of the pivots or gudgeons on which the wheel
turns three sixteenths of an inch toward one end of the churn will
accomplish this. That which I claim in the above described machine
as particularly new and of my own invention is the manner of applying the cord
to the pulleys for the purpose of churning

Witness { Matthew Packard
Allen Gray } Lucius Van Gorder

(1955 words)

(Filed June 27, 1832)