

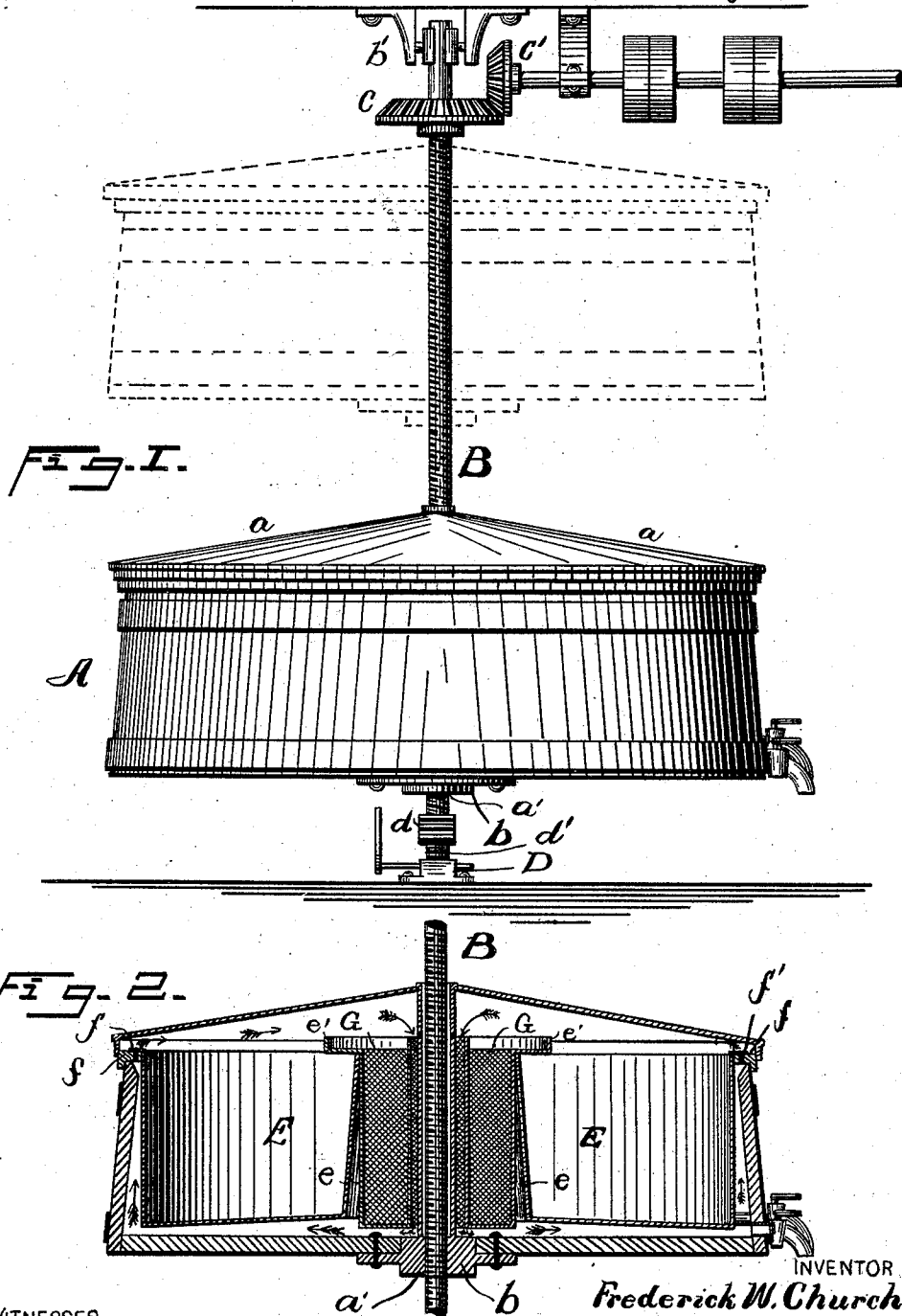
(No Model.)

2 Sheets—Sheet 1.

F. W. CHURCH.
APPARATUS FOR BUTTER MAKING.

No. 542,465.

Patented July 9, 1895.



WITNESSES:

Charles W. Marvin.

Jessie C. Murray.

INVENTOR
Frederick W. Church.

BY
Smith & Anson
ATTORNEYS.

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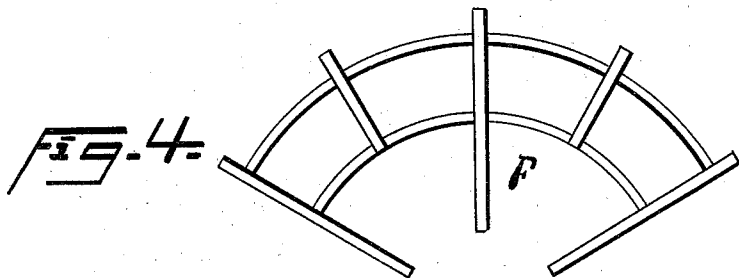
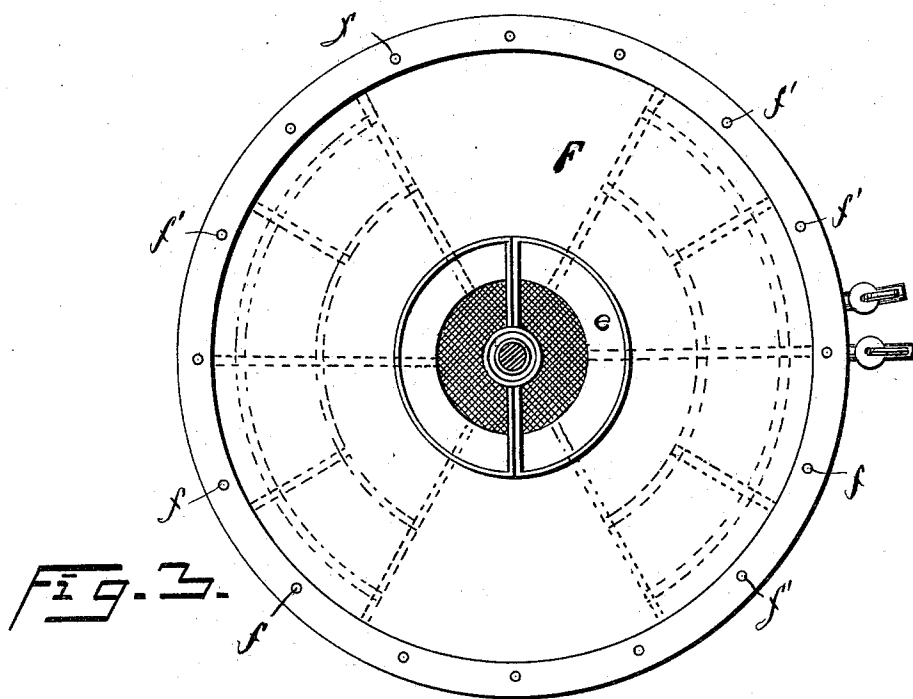
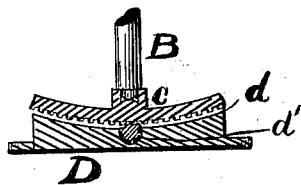


Fig. 5.



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UNITED STATES PATENT OFFICE.

FREDERICK W. CHURCH, OF BELGIUM, NEW YORK.

APPARATUS FOR BUTTER-MAKING.

SPECIFICATION forming part of Letters Patent No. 542,465, dated July 9, 1895.

Application filed April 6, 1895. Serial No. 544,625. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK W. CHURCH, of Belgium, in the county of Onondaga, in the State of New York, have invented new and useful Improvements in Apparatus for Butter-Making, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to improvements in apparatus for making butter.

My object is to produce a device for receiving the milk, cooling it, then raising the milk-receptacle to a level or position high enough to allow the milk and cream to run off of their own accord to the churn, and at the same time provide means for receiving the ice to cool the milk and to provide for the current of air to circulate around the vat; and to that end my invention consists in the several new and novel features and combination of parts hereinafter described and which are specifically set forth in the claims hereunto annexed.

It is constructed as follows, reference being had to the accompanying drawings, in which—

Figure 1 shows a side view of the device complete ready for use and showing the vat or milk-receptacle in an elevated position in dotted lines. Fig. 2 is a vertical transverse section showing the interior of the vat or ice-receptacle and indicating the currents by arrows. Fig. 3 is a top plan view of the milk-vat the cover removed, and showing a frame work in the bottom of the vat-holding receptacle in dotted lines. Fig. 4 is a view of one section of the frame upon which the vat rests. Fig. 5 is a view of the vat-tilting mechanism.

Similar letters of reference indicate corresponding parts.

A is a vat-holding receptacle, constructed preferably of wood and provided with a cover *a* and a central opening *a'*, and at its lower end is provided with a nut *b*, internally threaded. The cover *a* is also provided with a central opening.

B is a threaded shaft vertically mounted, the threads of which are adapted to engage with the threads upon the nut *b* for the purpose of raising and lowering the vat-holder or receptacle A. The threaded shaft B is journaled at its upper end so that it may be moved to and fro, as shown at *b'*, and *c* is a cog se-

cured upon the shaft B and adapted to engage with the cog *c'*, by which it is rotated. Inasmuch as the cog *c* is secured rigidly to the shaft B, the said shaft B is rotated when the cog *c* is turned. The cog *c'* is adapted to be turned in either direction by any ordinary and well-known means.

It will be observed that when the shaft B is turned in one direction the receptacle A will be raised on account of its engagement with the thread upon the nut *b'*, and that the reverse rotation of the shaft B will allow the receptacle A to descend. The lower end of the shaft B is secured to a rack C, having teeth *d* upon its lower face adapted to engage with the teeth upon a wheel *d'*, mounted in the bracket D, so that by rotating the wheel *d'* the shaft B will be moved to or from its vertical position, as shown in Fig. 1, for the purpose of tipping or tilting the receptacle A so as to allow the milk, cream, and water from the interior of the receptacle to pass out through the faucets.

E is a vat constructed substantially as shown, so as to set within the vat-holding receptacle A, upon the rack-bars or frame F in the bottom of the receptacle A, and is provided with a central opening *e*. Upon its rim it is also provided with a flange *f*, having vertical perforations *f'* for the purposes hereinafter set forth.

G is an ice-receptacle having its exterior conforming to the opening *e* through the center of the vat and its interior wall surrounding the shaft B and perforated laterally, so as to allow the air from the ice to come in contact with the inner wall of the vat. It is also provided on its upper side with a rim or flange *e'*. The ice-receptacle G is preferably constructed in two parts, so that it may be readily removed and replaced. It will be observed that as the air passes in at the top upon the ice and comes in contact therewith it becomes cooled. It then passes down to the bottom of the vat-receptacle and thence passes under and around it, and as it becomes more or less heated by the milk, passes up around its periphery and out through the openings or perforations *f'*, thereby effectually cooling the milk. The rack-bars F are placed in the bottom of the vat-receptacle and afford easy and convenient means for

supporting the vat and may be readily removed for cleaning purposes.

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

1. An apparatus for making butter comprising a milk-vat or receptacle mounted upon a vertically threaded shaft, a vertically threaded shaft, means for rotating said shaft for the purpose of raising and lowering said vat and means for tilting said shaft and vat.

2. An apparatus for making butter comprising a milk-vat or receptacle mounted upon a vertically threaded shaft, a vertically threaded shaft, said shaft being hinged at its upper end, means for rotating said shaft for the purpose of raising and lowering said vat and

means for tilting said shaft at its lower end for the purpose of tilting said vat.

3. The combination with a vertical threaded shaft of a vat-receptacle having a central threaded nut with which the threads on said shaft are adapted to engage, a faucet in said receptacle, a vat having a central opening and a vertically perforated rim and a draw-off faucet, and an ice-receptacle mounted in said vat opening, substantially as described for the purposes set forth.

In witness whereof I have hereunto set my hand on this 19th day of March, 1895.

FREDERICK W. CHURCH.

In presence of—

HOWARD P. DENISON,
JESSIE E. MURRAY.